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Well-being, Coping and Growth Following Trauma: A Thesis Research Portfolio

Fiona Claire Turnbull

Doctorate in Clinical Psychology

University of Edinburgh

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Dedication

To my family – for your unconditional love and support in everything I do.

Andy – for reminding me of the world beyond clinical psychology, and choosing to explore it with me.

“We look before and after,
And pine for what is not;
Our sincerest laughter
With some pain is fraught;
Our sweetest songs are those that tell of saddest thought.”

Percy Bysshe Shelley, Ode to a Sky Lark

“The robbed that smiles, steals something from the thief.”

William Shakespeare, Othello

"To forgive is to set a prisoner free and discover that the prisoner was you."

Louis B. Smedes

“You, yourself, as much as anybody in the entire universe, deserve your love and affection.”

Buddha

Quotations retrieved from www.brainyquote.com (March 2013)

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Thesis Abstract

This thesis portfolio consists of two key pieces of work, a systematic review and an empirical research project, both of which explore outcomes associated with traumatic experiences.

Systematic Review – There is a growing body of literature which demonstrates that, alongside the difficulties people may experience following trauma, many individuals are also likely to report growth following the struggle to come to terms with the event. This review explores the evidence for a relationship between reported growth and distress following civilian, interpersonal trauma. The review includes 13 studies which met the inclusion criteria (9 cross-sectional and 4 prospective). Findings are inconsistent and suggest that prospective study designs are more likely than cross-sectional designs to report significant relationships. A number of methodological issues and the implications for future research are discussed.

Empirical Research Project – Survivors of childhood sexual abuse (CSA) present with a wide range of difficulties and the current evidence base for the treatment of complex trauma is limited. It is proposed that self-compassion and forgiveness based approaches may have the potential to be of benefit to this population. This cross-sectional study explored the relationships between posttraumatic stress symptoms, dissociation, self-blame, self-compassion and forgiveness. A clinical sample of adult survivors of CSA (N = 19) completed all measures. In keeping with previous literature, significant relationships were found between posttraumatic stress and both dissociation and self-blame. Forgiveness was positively correlated with dissociation, but not the other variables and no significant relationships were found between self-compassion and the variables of interest. Findings, implications and study limitations are discussed.

Thesis Abstract Word Count - 255

Chapter 1 – Overview of Thesis Portfolio

This thesis comprises of two key individual pieces of work: a systematic review and an empirical research project. Both these articles aim to explore and build upon current knowledge of the range of outcomes following exposure to traumatic events, and how these outcomes may interact. Whilst the systematic review focuses upon distress and growth following interpersonal trauma, the research project looks specifically at outcomes in adult survivors of childhood sexual abuse. Thus, despite drawing upon different strands of overlapping trauma research these discrete pieces of work do not directly lead into one another.

The following chapter therefore provides a standalone journal article outlining the systematic review. Chapter 3 provides additional background information and theory drawn upon by the empirical research project. Chapter 4 presents this research in the form of a journal article, and Chapter 5 provides additional data analysis and discussion. What these two pieces work presented here do have in common is a focus on interpersonal trauma and an interest in outcomes that extend beyond the symptoms associated with psychopathology. This is of relevance as not all individuals who experience potentially traumatic events will go on to develop mental health difficulties. Understanding all types of response to these events, including what contributes to posttraumatic resilience, recovery and growth, is vital to service providers being able to offer the most holistic and optimistic response to those who need it.

Chapter 2 – Systematic Review

Psychological Distress and Growth following Interpersonal Trauma: A systematic review

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This article was written in accordance with the guideline for Clinical Psychology Review (Appendix I).

Total Word count (excluding abstract, references and appendices) – 9, 788 words

Abstract

Previous reviews of the posttraumatic growth literature have found inconclusive results regarding the relationship between posttraumatic growth and distress following trauma. To date these reviews have all included a heterogeneous range of traumatic and stressful life events. The aim of this review was to assess the evidence for a relationship between posttraumatic growth and distress following civilian, interpersonal trauma. A systematic review of databases, journals and conference proceedings was carried out. Empirical papers which assessed posttraumatic growth and distress in an adult population were included and the methodological quality of relevant papers assessed against pre-specified criteria. A total of 12 papers (13 studies) met the criteria for inclusion. Four of the studies were prospective in design, and nine were cross-sectional. Inconsistent results were found in respect of the cross-sectional studies: four found a positive relationship, one a negative relationship and four no relationship. In contrast, three of the four prospective studies reported positive relationships. Theoretical and methodological issues within the current evidence base may have contributed to this pattern of results and limit the conclusions which can be drawn. Implications for future research and clinical practice are discussed.

Abstract word count - 188

Keywords: “posttraumatic growth”; “trauma”; “posttraumatic stress”; “systematic review”

Background

Posttraumatic Growth

Throughout human history people have reported finding good in the midst of adversity and over the last 30 years or so researchers have begun to approach this subject with the intention of exploring it scientifically. Early investigators in the field have documented individuals reporting positive outcomes associated with a wide range of adverse circumstances including: bereavement; serious health conditions; incest; rape and combat (Tedeschi & Calhoun, 1996). Researchers have referred to accounts of this type of experience using a number of terms including “benefit-finding” (Helgeson, Reynolds & Tomich, 2006), “adversarial growth” (Linley & Joseph, 2004), “stress-related growth” (Park, Cohen & Murch, 1996) and “posttraumatic growth” (Calhoun & Tedeschi, 1998). The term most widely found in the literature, and the one used within this review, is that of “posttraumatic growth”.

Posttraumatic growth (PTG) has been defined as “the individual’s experience of significant positive change arising from the struggle with a major life crisis” (Calhoun, Cann, Tedeschi & McMillen, 2000; p. 521). This definition highlights that it is the struggle to come to terms with the event in the aftermath of trauma that leads to growth, not the occurrence of the event itself. It also refers to the fact that in the areas where growth is perceived to have occurred, functioning has developed beyond that of pre-trauma levels. It has been argued that growth can be conceptualised as consisting of three broad dimensions (relationships, view of self and life philosophy) which contribute to a single higher order factor (Joseph & Linley, 2006; Tedeschi, 1999).

Calhoun and Tedeschi (2006) proposed a comprehensive model of PTG which centres around cognitive processing and challenge to core beliefs. It has been proposed that following a traumatic event one’s assumptions and beliefs about the world, the self and others can be

shaken or even shattered. The need for one to re-consider and rebuild these views is what is hypothesised to lead to growth. Although primarily a cognitive model, many factors are understood to influence when and how growth develops (Tedeschi, Calhoun & Cann, 2007), in particular social support and environmental/contextual influences (McMillan, 2004).

Contrary to the perception of rumination following trauma being associated with negative outcomes, within this framework certain forms of intentional rumination (or reflection) can be considered to have beneficial effects in promoting cognitive processing and growth (Stockton, Hunt & Joseph, 2011). This is supported by the finding that deliberate rumination was related to growth and intrusive rumination to distress (Triplett, Tedeschi, Cann, Calhoun & Reeve, 2012) and it has been proposed that increased social support facilitates the move from intrusive to deliberate rumination by offering alternative perspectives on the event (Prati & Pietrantonio, 2009). Christopher (2004) has put forward a detailed biopsychosocial evolutionary perspective on responses to traumatic stress, which argues that growth is in fact the normal, adaptive response to traumatic stress and psychopathology the maladaptive stress response. In support of the idea that rumination can lead to the beneficial outcomes of growth he argues that rationality is the latest, and most effective, evolutionary adaption to manage stress.

Much debate in the literature has centred upon whether growth is actual or perceived and whether PTG is an outcome, a coping strategy or both (Zoellner & Maercker, 2006). Experimental evidence has been presented which points to the possibility of self-reported growth containing a self-deceptive, illusory aspect which is hypothesised to serve a coping function rather than reflect real change (Macfarland & Alvaro, 2000). This perspective states that people report benefits following difficult situations to either alleviate or deny their current distress. Incorporating these findings, Maercker and Zoellner (2004) proposed a two-component model of PTG which comprises of both an 'actual' and a 'perceived' (or illusory)

aspect, with ‘actual’ growth being understood as an outcome and ‘perceived’ growth as part of a process of coping. It is feasible that following a traumatic experience, choosing to see something positive in the experience immediately post-trauma, whilst not being associated with objective change initially, may increase the likelihood of experiencing real change as time goes on. More recent findings have suggested that whilst perceived growth is related to increased distress over time, actual growth is related to decreased distress (Frazier et al., 2009).

Despite the issues surrounding the operationalising of the construct there is strong evidence that people consistently report positive outcomes following trauma. In their review, Joseph and Linley (2006) concluded that overall the evidence is “...overwhelmingly supportive that growth often occurs...” (p. 1042).

The Relationship between Posttraumatic Growth and Distress

Whilst the literature on PTG is still developing, the majority of research investigating outcomes associated with trauma has focussed upon negative effects and psychopathology (Bonanno & Mancini, 2012). Although posttraumatic stress disorder (PTSD) has been the most widely investigated outcome following trauma, exposure to traumatic events has been associated with increased risk of other difficulties including major depressive episodes, anxiety disorders, dissociation and substance abuse (Breslau, 2009; DePrince, Chu & Pineda, 2011). When investigating PTSD, the definition of what is considered to be a potentially traumatic event is that an individual must have been exposed to “actual or threatened death, serious injury or sexual violence” either through direct experience, witnessing the event occurring to others, learning that the event has occurred to a close family member or friend or repeated/extreme exposure to aversive details of the event (American Psychiatric Association, 2013). Although the term “trauma” is used in literature relating to both growth

and distress, it appears to have been operationalised somewhat differently in the two strands of research. In relation to distress, and specifically PTSD, a trauma is defined as above. In the literature relating to positive outcomes following a trauma, the term is often used more broadly to refer to stressful, aversive or challenging life events which would not be considered truly traumatic.

Some research has shown PTG to have a positive linear relationship with PTSD symptoms (e.g. Solomon & Dekel, 2007; Holgerson, Bole & Holen, 2010) and it has previously been hypothesised that (in keeping with the cognitive model outlined earlier) an event has to be significant enough to cause distress, and thus disrupt previously held beliefs, in order to allow the appropriate conditions for growth to occur (Calhoun & Tedeschi, 2006). However previous reviews of the PTG literature found that the evidence for a relationship between PTG and a wide range of variables (including psychopathology) was inconsistent (Linley & Joseph, 2004; Zoellner & Maercker, 2006; Helgeson, Reynolds & Tomich, 2006).

A number of methodological issues may have contributed to this. Firstly, the terms which are used to define the construct vary: benefit finding (Helgeson, Reynolds & Tomich, 2006); adversarial growth (Linley & Joseph, 2004) and posttraumatic growth (Zoellner & Maercker, 2006). Although many terms are used interchangeably within the extant literature, the specific language used in defining a construct has implications for how that construct will be understood. In this case reporting of benefits following a stressful life event may not necessarily be considered the same as growth in one or more areas to beyond pre-trauma levels. The issue of definition can be seen most clearly in relation to the heterogeneity of samples of the included studies across all three reviews. Although studies were included which investigated samples which appeared to meet the definition of trauma as outlined above, other stressful or adverse events included: nursing stress; care-giving; rheumatic disease; laboratory stressor; chemical dependency and a relationship breakup. Whilst these

are potentially stressful events, they may not always reach the threshold (as described above) to be considered truly traumatic. As the theory suggests that an event is required to produce a “seismic” shift in beliefs in order to lead to growth (Janoff-Bulman, 2004), it may be questioned whether some of the events reported on are likely to provide the conditions hypothesised as necessary for growth to occur. The reviews also included high numbers of studies which investigated health related stressors. Bostock, Sheikh and Barton (2009) in a review of specifically health related trauma point out that in the case of chronic health threats the “post-trauma” period can be difficult to define, and although often taken as the point of diagnosis the potential for stressful, aversive and traumatic events is likely to be ongoing. When Helgeson, Reynolds and Tomich (2006) split their sample, benefit finding was found to be related to less distress in the health stressor sample but unrelated to distress in the “personal trauma” sample (which was defined as any kind of stressor not construed as health).

Issues relating to sampling and measurement provide another potential explanation for the inconsistency of findings. Zoellner and Maerker (2006) reported that the use of standardized measures was related to increased findings of positive relationships between growth and distress, and Helgeson, Reynolds and Tomich (2006) stated that effect sizes were larger for well-established measures. To put this in context, Linley and Joseph (2004) found that only 12 of 39 studies which they reviewed used standardized measures. They also reported that three included studies had growth prevalence rates of 100% as samples were selected based upon reports of positive change. Finally is the issue of most studies in the field utilising a cross-sectional design. Zoellner and Maerker (2006) reported that most of the cross-sectional studies did not find a systematic relationship between PTSD or depression and PTG, but the few longitudinal studies included all found positive relationships. They suggest

that cross-sectional designs may find greater variation in results as they capture unknown proportions of the “constructive” and “illusory” aspects of growth (referred to above).

As already stated, the findings of these reviews were broadly found to be inconclusive. Linley and Joseph (2004) reported that rumination, intrusions and avoidance were positively associated with growth, whilst Helgeson, Reynolds and Tomich (2006) concluded that benefit finding was related to lower levels of depression and greater positive well-being but unrelated to anxiety and measures of global distress. However effect sizes tended to be small and the cross-sectional nature of the majority of studies included means that causality cannot be inferred. Regarding the future direction of PTG research, the authors of these reviews concluded that there is a need for: objective indicators in addition to self-report measures; addressing systematically the issues related to PTG measurement and the wide variation in trauma type, and studies with prospective, longitudinal and pre- and post- designs. At a theoretical level there is a need to tease apart the complex issue of growth being understood as both process and outcome, and the fact that different factors may be at work in PTG at different stages of coping, recovery and growth.

To date, previous reviews of the literature relating to posttraumatic growth have incorporated studies with samples which cover a heterogeneous range of challenging, stressful and aversive life events. It is not unreasonable to expect the outcomes following experiences such as rape, cancer, bereavement and war to be varied and thus lead to apparently inconclusive findings (as have been reported). The literature cited above highlights apparent differences in outcomes between health related and personal stressors (Helgeson, Reynolds & Tomich, 2006). Furthermore within the wider trauma literature there have been reported differences in distress outcomes according to trauma type. Brewin, Andrews and Valentine (2000) describe “numerous” differences between military and civilian populations in respect of specific risk factors for PTSD, and the National Institute for Clinical Excellence (NICE)

guidance (2005) states that those experiencing intentional acts of interpersonal violence (particularly rape and combat) are more likely to develop PTSD than those who have experienced accidents or natural disasters. Prevalence rates for PTSD following specific trauma have been reported as follows: 55% following rape, 35% after childhood abuse, 17% following physical assaults and 7% after severe accidents (Kessler, Sonnega, Bromet & Nelson, 1995).

Within the wider trauma literature there remains limited understanding of the full range of responses to trauma that may occur. Specifically within the posttraumatic growth literature there is a need for increased clarity on the relationship between distress and growth. To date this may have been clouded by the heterogeneity of samples. In respect of the clinical implications of the research, interpersonal traumas are of particular interest as they are likely to generate some of the highest instances of distress.

Aim of this review

The purpose of this systematic review is therefore to explore the relationship between posttraumatic distress and growth, specifically following civilian, interpersonal trauma. Within this review, “civilian” is understood to refer to any individual who is not on active military duty and “interpersonal” is used to describe an event which is perpetrated by one or more individuals against another. The review will also assess the extent to which the field has been able to address successfully the methodological issues raised in previous reviews, with this particular population.

Methods

Inclusion and Exclusion Criteria

The inclusion and exclusion criteria were developed according to the recommended guidelines produced by the Centre for Reviews and Dissemination (CRD) (2008): population, comparators, outcomes and study design (PCOS). Only full length articles, published in English were included in the review.

Population

Studies were included when participants were adults (aged between 18-65 years). Where studies indicated that the majority of participants were within this age range, but some fell outside this age bracket, these studies were included. To be included in the review participants were required to have been clearly identified in the study as having experienced at least one civilian, interpersonal trauma. Studies were excluded when the primary trauma investigated was non-civilian or not interpersonal in nature, situations where the trauma could be considered ongoing (e.g. an abusive relationship) or when the study included a range of different trauma types and it was not possible to separate the results.

Comparator/Outcomes

The comparators of interest were posttraumatic distress and posttraumatic growth. Therefore only studies including outcome measures which were clearly defined as capturing these constructs were included in the review.

Study Design

Only primary and empirical studies were included for review. Any studies with cross-sectional or prospective designs were eligible for inclusion. Previous systematic reviews,

literature reviews and any other descriptive papers without quantifiable data were excluded. Studies which were purely qualitative in design were excluded from the review, however where qualitative measures were used to investigate posttraumatic growth, and were subsequently coded and included in analysis, these studies were considered suitable for inclusion in the review. Clinical case study or case series design were excluded from the review due to high risk of bias and limited generalisability of findings.

Search Strategy

The Cochrane Library database of Systematic Reviews and the Database of Abstracts of Reviews of Effects (DARE) were searched in order to identify whether a similar review had recently been conducted. A scoping search of the literature was carried out in order to identify key search terms and further explore whether similar reviews had recently been conducted.

Stage 1

The first stage of the search was carried out in week 12, 2013. The initial search involved searching three databases, PsychInfo (1987-2013), PILOTS (1994-2013) and Medline (1946-2013) for the search terms: “posttraumatic growth”; “benefit finding”; “stress-related growth” and “adversarial growth”. Titles and abstracts were screened for potential relevance, and the full journal article was retrieved when there was not sufficient information within the title and abstract. Articles retrieved via the databases were screened in order to identify which journals appeared most often. These were: Journal of Traumatic Stress; Traumatology; Psychological Trauma: Theory, Research, Practice and Policy and Journal of Loss and Trauma. The same search terms were also run in these specific journals, and each journal was hand-searched for the three years preceding the review. This search was up-dated in week 44, 2014.

Stage 2

Following the initial search strategy, the reference lists of all papers selected for inclusion, along with past reviews, were hand-searched to identify any further relevant papers not found in the electronic searches. This was repeated until no further articles were identified.

Stage 3

All conference proceedings available (2007-2012) on the website for the International Society for Traumatic Stress Studies (ISTSS) were hand-searched. The web search engines Google and Google scholar were also searched for other related websites or conference details using the search terms above, in combination with “PTSD” and “trauma”.

Data Extraction

The information retrieved from the selected studies included: author; year of publication; study design; measures of posttraumatic distress and growth; time since trauma; trauma history; trauma characteristics and participant characteristics.

Study Inclusion

The database search yielded 144 potential studies and the journal search provided an additional 5 articles not identified via the databases. A further five relevant studies were identified through hand searching of reference lists. The search process and reasons for exclusion of papers is outlined in Figure 1. One paper contained two studies, utilising separate samples. A final total of 14 studies (13 papers) were included in the final review.

Methodological Quality Assessment

There is currently no available guidance on the quality assessment for cross-sectional studies. For the purposes of this review the criteria for assessing methodological quality (Table 1) was

adapted from the guidance provided by the Scottish Intercollegiate Guidelines Network (SIGN) (2011a; 2011b) and the Critical Appraisal Skills Programme (CASP; 2004) related to cohort and case-control studies, and from Pettigrew and Roberts (2006), “Framework for appraising a survey” (p.142).

Figure 1 – Flow chart outlining search process and reasons for exclusion

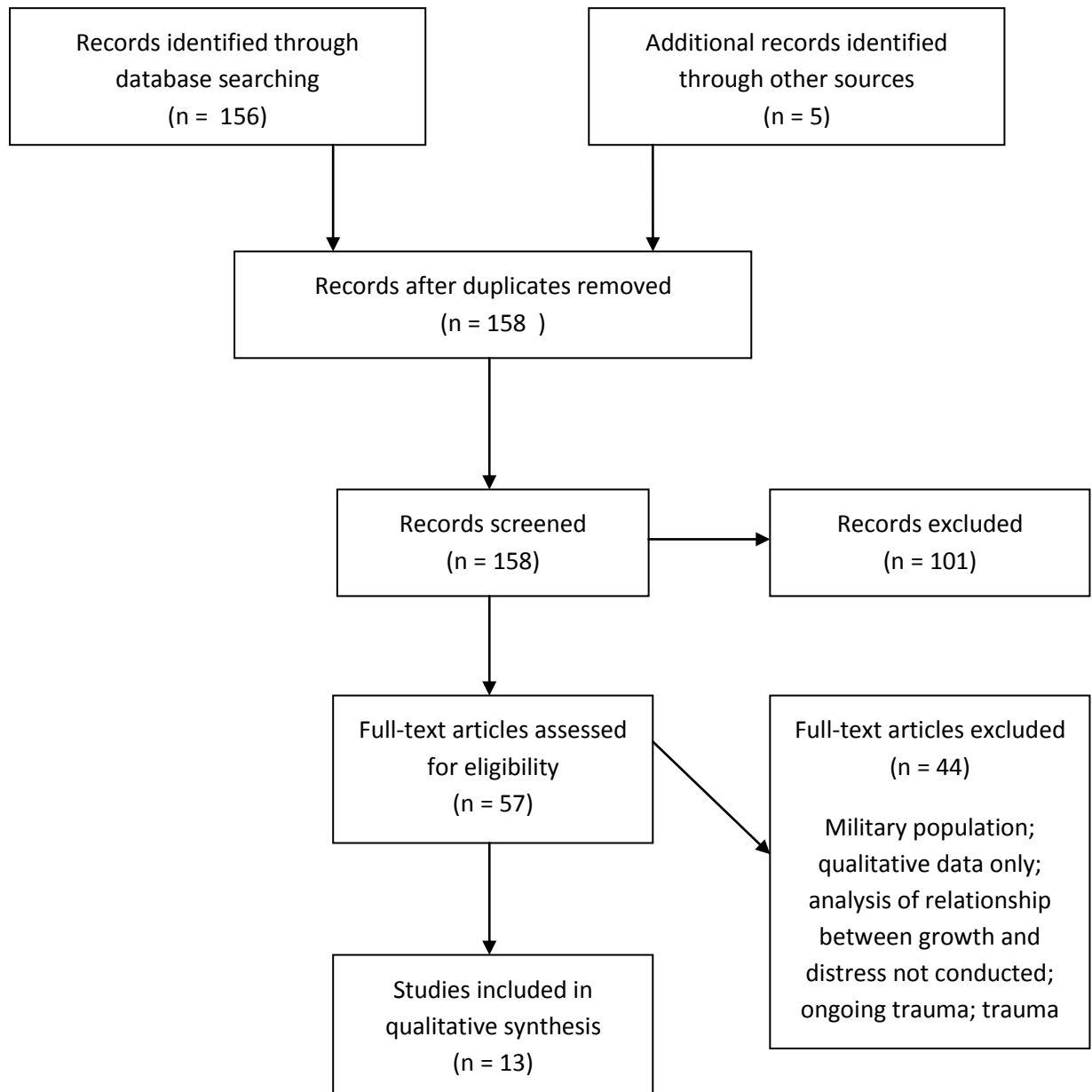


Table 1 – Methodological Quality Criteria

<u>Quality Criteria</u>	<u>Description</u>	<u>Categorisation</u>
1. Generalisability	Sample demographics are reported and compared to non-completers and national statistics.	Well Covered
	Sample demographics are reported and compared either to non-completers or to national statistics.	Adequately Addressed
	Sample demographics are reported but no comparisons made.	Limited
	Limited or no demographics are reported.	Not Addressed
2. Measures used have established reliability and validity	All measures have reported evidence of reliability and validity.	Well Covered
	At least 50% of measures have reported evidence of reliability and validity.	Adequately Addressed
	Less than 50% have reported evidence of reliability and validity OR the development of measures is discussed but psychometric properties are not formally established.	Limited
	Reliability and validity are not discussed.	Not Addressed
3. Selected measures are appropriate for assessment of the related constructs (subjective and objective measures are utilised where appropriate).	Selected measures provide good assessment of constructs (measurement of constructs is thorough).	Well Covered
	Selected measures provide adequate assessment of constructs (measures are appropriate but limited).	Adequately Addressed
	Selected measures provide poor assessment of constructs (most but not all measures are appropriate).	Limited
	Selected measures are inappropriate.	Not Addressed

Table 1 – Methodological Quality Criteria continued

<u>Quality Criteria</u>	<u>Description</u>	<u>Categorisation</u>
4. Baseline Assessed	Prospective design, all measures assessed at different time intervals.	Well Covered
	Prospective design, some measures assessed at more than one time interval.	Adequately Addressed
	Retrospective self/other-report of prior functioning.	Limited
	One time point only assessed.	Not Addressed
5. Effect of trauma characteristics and trauma history addressed.	The impact of this has clearly been considered and the study design and analysis clearly controls for these variables.	Well Covered
	Some evidence of consideration in study design and analysis.	Adequately Addressed
	Only minimal consideration given to the impact of these factors on outcomes.	Limited
	Not reported/discussed, and no evidence that it was taken into consideration.	Not Addressed
6. Statistical analysis appropriate and clearly documented	Statistics appropriate and all clearly reported.	Well Covered
	Statistics appropriate and majority clearly reported.	Adequately Addressed
	Statistics appropriate and few clearly reported.	Limited
	Statistics inappropriate or not clearly reported.	Not Addressed
7. Statistical Power	Reported and achieved	Well Covered
	Reported and not achieved	Limited
	Not reported	Not Addressed
8. Effect Size	Effect size reported	Yes
	Effect size not reported	No

Results

General Characteristics of Included Studies

A summary of the descriptive characteristics and key findings of the studies included for review is provided in Table 2, below (studies are presented in alphabetical order, by author).

Study aims: Eight of the studies specifically stated that the aim of the study was to explore the relationship between posttraumatic growth and distress, within the specific population recruited. Other studies reported analysis of the relationship between these two variables as part of wider analysis looking at a range of other factors, such as social reactions (Borja, Callahan & Long, 2006), revictimization (Kunst, Winkel & Bogaerts, 2010), perpetrator identity (Lev-Wiesel, Amir & Besser, 2005), quality of life (Teodorescu et al., 2012) and optimism (Updegraff & Marshall, 2005).

Types of study: The majority of the studies reported a cross-sectional design, with only four studies utilising a prospective study design. One paper (Kleim & Ehlers, 2009) reported on two separate studies, both of which were cross-sectional in respect of the variables of interest for this review.

Participants: Sample sizes ranged from N = 40 to N = 806, and were drawn from a range of different sources, including community samples (5), treatment services (6) and students (2). Five of the studies had an all female sample, and four studies had a majority of male participants. Demographics were not reported by McMillen, Smith and Fisher (1997).

Trauma type and characteristics: The studies reviewed looked at the following types of interpersonal trauma: assault or violence (4); childhood sexual abuse (2); refugees (2); sexual assault (3); terrorism/war (1) and one study compared three types of disaster, including a mass shooting (McMillen, Smith & Fisher, 1997). Time since trauma varied extensively

across the studies. Prospective studies took baseline measurements at between 1-5 weeks following trauma, with the exception of Kunst, Winkel and Bogaerts (2010), where the mean was 4.7 years. Follow-up assessments varied between three months and three years. Cross-sectional studies varied in time since trauma from a few days (Hall et al., 2010) to 17.7 years (Teodorescu et al., 2012). Two studies did not report length of time since trauma (Lev-Wiesel, Amir & Besser, 2005 and Powell et al., 2003).

Measures used: Nine of the included studies (two prospective) used the Posttraumatic Growth Inventory (PTGI) (Tedeschi & Calhoun, 1996) to assess levels of self-reported growth following a specific traumatic event. Of the four that did not, three used other standardised measures and only one collected and coded qualitative data (Frazier, Conlon & Glasser, 2001). Measures of distress varied more widely and included simple self-report questionnaires as well as lengthy diagnostic interviews, all of which were standardised. Twelve different measures of distress were utilised, and assessed levels of posttraumatic stress symptomatology and/or depression.

Levels of reported growth and distress: Those studies utilising the PTGI reported small to medium levels of growth. All but one study (Lev-Wiesel, Amir & Besser, 2005) reported mean total scores, ranging from $M = 33.70$ (Updegraff & Marshall, 2005) to $M = 64.04$ (Grubaugh & Resick, 2007). Average scores reported elsewhere have ranged from $M = 66$ to $M = 90$ (Tedeschi & Calhoun, 1996). Kleim and Ehlers (2009) stated that only 60% reported some degree of growth and both they and Teodorescu et al. (2012) stated that overall reported growth was generally low.

The four studies which did not use the PTGI also reported levels of growth endorsed by participants. Frazier, Conlon and Glasser (2001) collected qualitative data and indicated that positive posttraumatic changes were reported at all data collection points. Hall et al.'s (2010)

measure of growth was six items taken from the Conservation of Resources evaluation (Hobfoll & Lilly, 1993), for which they reported the average growth ($M = 8.97$) however comparison data is not provided. McMillen, Smith and Fisher (1997) provided the percentage of participants who endorsed benefit of any kind, both at 4-6 weeks (76.3%) and at three years (69.2%), with enhanced closeness rated as the biggest sub-group benefit. Borja, Callahan and Long (2006) reported a moderate endorsement of growth on the Perceived Benefits Scale (PBS) (McMillen & Fisher, 1998) ($M = 26.23$) in comparison with other samples.

The psychological distress measured in the studies was depression and posttraumatic stress symptoms, although levels were not reported in all papers. Grubaugh and Resick (2007) reported that 51.5% of participants met clinical cut-offs for depression, and Teodorescu et al (2012) found that 93% were above clinical cut-offs. With regard to posttraumatic stress symptoms Frazier, Conlon and Glasser (2001) reported incidents of PTSD ranging from between 78% at 2 weeks to 48% at 12 months post-trauma. Grubaugh and Resick (2007) stated that 90.9% of their participants met the criteria for PTSD. Shakespeare-Finch and de Dassel (2009) found that 95% of their sample had clinical levels of PTS symptoms and Teodorescu et al. (2012) stated that 80% were above the clinical cut-off for PTS symptoms. At baseline, 26% of the sample in Updegraff and Marshall (2005) met clinical cut-off for PTSD. Other studies provided mean scores of distress but did not provide a context for scores to be interpreted and compared with other samples (Hall et al., 2010; Kunst, Winkel & Bogaerts, 2010; Lev-Wiesel, Amir & Besser, 2005; Powell et al., 2003).

On the whole the studies included here can be regarded as including high levels of participants who would meet clinical cut-offs for depression and posttraumatic stress following trauma exposure. Although growth is lower than has been reported elsewhere

(Kleim & Ehlers, 2009), most participants in these studies endorsed positive change across a number of domains following from the traumatic event.

Table 2 – Descriptive data and findings of reviewed papers

<u>Author</u>	<u>Study Design and Aims</u>	<u>Trauma Type</u>	<u>Time Since Trauma</u>	<u>Participant Characteristics and Sample Size</u>	<u>Trauma History Assessment</u>	<u>Measure of Distress</u>	<u>Measure of PTG</u>	<u>Findings</u>
Borja, Callahan and Long (2006)	Cross-sectional, questionnaire. Relationship between adjustment and social reactions.	Sexual assault.	Mean = 17 months (SD = 17)	N = 63 100% Female. College students.	MSES LEQ	PDS SCL-90-R	PBS	PTSD symptoms sig. correlated with number of assaults. No relationship between positive and negative adjustment.
Frazier, Conlon and Glasser (2001)	Prospective, questionnaire. Relationship between posttraumatic life change and distress.	Sexual Assault.	2 weeks – 1 year.	N = 171 100% Female Via Sexual Assault Resource Service.	None.	BSI PTSD checklist	Post- traumatic Life Change	Over time negative change decreased and positive increased. 2 weeks to 2 months = greatest change. Sig. individual variation. At 12 months positive change unrelated to PTSD, but associated with depression. Negative change related to distress.
Grubaugh and Resick (2007)	Cross-sectional, questionnaire and structured interview Relationship between growth and distress.	Physical or sexual assault 64% sexual assault	≥ 3 months	N = 100 100% Female Community	Assault data only.	BDI - II CAPS – PTSD SCID	PTGI	Age and education associated with PTG. No relationship between growth and symptomatology.

Table 2 – Descriptive data and findings of reviewed papers contd.

<u>Author</u>	<u>Study Design and Aims</u>	<u>Trauma Type</u>	<u>Time Since Trauma</u>	<u>Participant Characteristics and Sample Size</u>	<u>Trauma History Assessment</u>	<u>Measure of Distress</u>	<u>Measure of PTG</u>	<u>Findings</u>
Hall et al (2010)	Cross-sectional, structured interview on telephone Relationship between distress and growth.	Terrorism/ war	Immediate, following cessation of hostilities	N = 806 53.5% Female Community (telephone recruitment)	Exposure to terrorism and war Past stressful life events	PTSD symptom scale	6 items (from the COR)	Various factors predictive of growth and distress. Growth directly, positively related to distress.
Kleim and Ehlers (2009)	2 studies, cross- sectional, structured interview. Relationship between growth, distress and other variables	Assault	<u>Study 1</u> 6 months post-assault <u>Study 2</u> Mean = 39 months	<u>Study 1</u> N = 180 32.2% Female Emergency room attendees. <u>Study 2</u> N = 70 38.1% Female Community	Assault data only.	SCID PSS-I BDI	PTGI	<u>Study 1</u> – curvilinear relationship between growth and PTSD/depression. <u>Study 2</u> – curvilinear relationship between growth and PTSD, not depression.
Kunst, Winkel and Bogaerts (2010)	Prospective. Online/postal questionnaire. Impact of growth on the association between PTSD and re-victimization	Inter-personal Violence	Mean = 4.7 years at T1 T2 = 6 months later	N = 202 61.9% Female Compensation Fund agency.	Re- victimization between T1 and T2	PSS-SR	PTGI	No main effect of growth on distress found. Growth mediated effect of re-victimization on distress.

Table 2 – Descriptive data and findings of reviewed papers contd.

<u>Author</u>	<u>Study Design and Aims</u>	<u>Trauma Type</u>	<u>Time Since Trauma</u>	<u>Participant Characteristics and Sample Size</u>	<u>Trauma History Assessment</u>	<u>Measure of Distress</u>	<u>Measure of PTG</u>	<u>Findings</u>
Lev-Wiesel, Amir and Besser (2005)	Cross-sectional, questionnaire Effect of PTSD on the relationship between perpetrator identity and growth.	Childhood sexual abuse.	Not known.	N = 93 100% Female. College students.	TEQ	PTSD Scale	PTGI	PTSD mediates relationship between perpetrator identity and growth. Both higher in intra- familial abuse. High positive correlation between growth and distress.
McMillen, Smith and Fisher (1997)	Prospective, structured interview. Perceived benefit and mental health outcomes following disasters.	3 trauma types: Mass Shooting Tornado Plane crash	T1 – 4-6 weeks T2 – 3 years later.	<u>Total</u> N = 195 Survivors and responders. <u>Shooting Only</u> N = 136	Disaster characteristics	DIS/DS	Perceived benefit; qualitative (coded for analysis)	Degree of perceived benefit varied with trauma type. Perceived benefit at T1 reduced PTSD at T2.
Powell et al (2003)	Cross-sectional, questionnaire Assess growth in a war exposed population.	Refugees and displaced persons.	Not stated.	<u>Refugees</u> N = 64 60.9% Female <u>Displaced Persons</u> N = 72 52.7% Female	CWE	PDS	PTGI	Growth was not related to distress or number of stressful events.

Table 2 - Descriptive data and findings of reviewed papers contd.

<u>Author</u>	<u>Study Design and Aims</u>	<u>Trauma Type</u>	<u>Time Since Trauma</u>	<u>Participant Characteristics and Sample Size</u>	<u>Trauma History Assessment</u>	<u>Measure of Distress</u>	<u>Measure of PTG</u>	<u>Findings</u>
Shakespeare -Finch and de Dassel (2009)	Cross-sectional, questionnaire To explore growth and distress.	Childhood Sexual Abuse	Mean = 13.64 years (SD = 11.32)	N = 40 100% Female Community	CSA data and rating of severity	IES-R	PTGI	Reported rates of growth comparable with other traumas. Total scores not sig. correlated.
Teodorescu et al (2012)	Cross-sectional, structured interview and questionnaire To assess growth, distress and quality of life.	Refugees, mixed trauma type.	Mean = 17.7 years (SD = 9.4)	N = 55 42 % Female Mental health, outpatients	LEC (part of the CAPS)	CAPS SCID MINI IES HSCL-25	PTGI-SF	Sig. negative correlation between growth and distress in those with many years since trauma. Negative correlation between growth and depression.
Updegraff and Marshall (2005)	Prospective, structured interview. Relationships between trauma severity, distress, growth and optimism.	Community violence	Mean = 7.3 days 3 month follow-up	N = 258 6% Female Hospitalised trauma centre attendees	Injury and trauma severity	PCL-C	PTGI	Growth predicted by baseline distress and optimism. Not associated with objective event severity, or T2 distress.

Measures: PDS - The Posttraumatic Diagnostic Scale (Foa, Cashman, Jaycox & Perry, 1997); PTGI – Posttraumatic Growth Inventory (Tedeschi & Calhoun, 1996); MSES – Modified Sexual Experiences Survey (Messman-Moore & Long, 2000); LEQ – Life Experiences Questionnaire (Long, 2005; cited in Borja, Callahan & Long, 2006); PBS – Perceived Benefits Scale (McMillen & Fisher, 1998); SCL-90-R – The Symptom Checklist 90-Revised (Derogatis, 1997); IES – Impact of Events Scale (Horowitz, Wilner & Alvarez, 1979); BSI – Brief Symptom Inventory (Derogatis & Spencer, 1982); BDI – II – Beck Depression Inventory (Beck, Brown, & Steer, 1996); CAPS-PTSD – Clinician Administered PTSD Scale (Blake et al., 1990); SCID – Structured Clinical Interview for DSM-IV (First, Spitzer, Gibbon & Williams, 2007); COR – Conservation of Resources Evaluation (Hobfoll & Lilly, 1993); PTSD symptom scale (Foa, Riggs, Dancu & Rothbaum, 1993); TEQ – Traumatic Events Questionnaire (Norris, 1992); DIS/DS – Diagnostic Interview Schedule Disaster Supplement (Robins & Smith, 1983; cited in MacMillen, Smith & Fisher, 1997); CWE – Checklist for War Related Experiences (Powell et al., 1998; cited in Powell et al., 2003); MINI – MINI International Neuropsychiatric Interview (Sheehan, et al, 1998); HSCL-25 – Hopkins Symptom Checklist-Depression Scale (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974); PCL-C – PTSD Checklist –Civilian (Weathers et al, 1993; cited in Updegraff & Marshall, 2005).

Methodological Quality Assessment

Ratings of methodological quality are provided in Table 3. Half the papers were reviewed for methodological quality by a second rater and there was 100% agreement across ratings. An overall numeric rating score is not provided as this has the potential to be misleading due to the fact that different criteria may have a greater or lesser impact upon the overall quality of the paper. For example, failure to use psychometrically sound measures may be considered weaker than a paper which did not report their effect size, however a numerical rating would not account for this. This is understood to be in keeping with current best practice (Centre for Reviews and Dissemination, 2008; Pettigrew & Roberts, 2006).

Overall the studies included within this review described clearly defined research questions and hypotheses, sampled well-defined populations with a standardised recruitment procedure and statistical analyses were also clearly outlined. Some bias is evident in sampling however as five of the included studies had all female samples. Where standardised measures were used the psychometric properties were generally well-reported or are recognised within the wider literature as being well-established. Those studies which did not utilise standardised measures did provide a transparent account of how data was collected and analysed. The extent to which trauma history and characteristics were accounted for varied across studies, but was not well addressed overall. Heterogeneity in respect of trauma type, amount of trauma exposure and time since trauma is evident both within and across the studies reviewed. Finally, the lack of reporting on power, effect sizes and comparison with other populations limits the generalisability of findings.

Table 3 – Quality Ratings

<u>Paper</u>	<u>Generalisability</u>	<u>Reliability/ Validity</u>	<u>Appropriate Measures</u>	<u>Baseline Assessed</u>	<u>Trauma Characteristics</u>	<u>Statistical Analysis</u>	<u>Power Calculation</u>	<u>Effect Size</u>
Borja, Callahan and Long (2006)	Adequately addressed	Well covered	Adequately addressed	Not addressed	Adequately addressed	Well covered	Well covered	No
Frazier, Conlon and Glasser (2001)	Well covered	Well covered	Adequately addressed	Well Covered	Limited	Well covered	Well covered	Yes
Grubaugh and Resick (2007)	Limited	Well covered	Adequately addressed	Not Addressed	Adequately addressed	Well covered	Not addressed	No
Hall et al (2010)	Well covered	Limited	Adequately addressed	Not addressed	Well covered	Well covered	Well covered	No
Kleim and Ehlers (2009)	1.Adequately addressed 2.Adequately addressed	1.Limited 2.Limited	1.Adequately addressed 2.Adequately addressed	1.Not addressed 2.Not addressed	1.Limited 2.Limited	1.Well covered 2.Well covered	1.Not addressed 2.Not addressed	1.No 2.No
Kunst, Winkel & Bogaerts (2010)	Adequately addressed	Well covered	Adequately addressed	Adequately addressed	Limited	Well covered	Not addressed	No
Lev Wiesel, Amir & Besser (2005)	Limited	Limited	Adequately addressed	Not addressed	Adequately addressed	Well covered	Not addressed	No

Table 3 – Quality Ratings continued

<u>Paper</u>	<u>Generalisability</u>	<u>Reliability/ Validity</u>	<u>Appropriate Measures</u>	<u>Baseline Assessed</u>	<u>Trauma Characteristics</u>	<u>Statistical Analysis</u>	<u>Power Calculation</u>	<u>Effect Size</u>
McMillen, Smith & Fisher (1997)	Not addressed	Limited	Adequately addressed	Well covered	Adequately addressed	Well covered	Not addressed	No
Powell et al (2003)	Limited	Limited	Adequately Addressed	Not addressed	Adequately addressed	Well covered	Not addressed	No
Shakespeare- Finch & de Dassel (2009)	Limited	Well covered	Adequately addressed	Not addressed	Adequately addressed	Well covered	Not addressed	No
Teodorescu et al (2012)	Limited	Adequately addressed	Adequately addressed	Not addressed	Adequately addressed	Well covered	Limited	No
Updegraff & Marshall (2005)	Adequately addressed	Adequately addressed	Adequately addressed	Well Covered	Limited	Well covered	Not addressed	No

Relationship between Growth and Distress

For clarity of presentation and analysis, the studies included in this review are discussed according to study design.

Cross-sectional studies

A total of nine cross-sectional studies were included, with all nine examining the relationship between growth and posttraumatic stress, and with four of these also investigating the relationship between growth and depression. Five cross-sectional studies found a significant relationship between posttraumatic growth and posttraumatic stress symptoms. Of these, four found positive correlations (Hall et al., 2010; Kleim & Ehlers, 2009; Lev-Wiesel, Amir & Besser, 2005) and one negative (Teodorescu et al., 2012). Of those investigating depression, one found a negative relationship (Teodorescu et al., 2012), one found a positive relationship (Kleim & Ehlers, 2009, Study 1) and two did not find a significant relationship (Grubaugh & Resick, 2007; Kleim & Ehlers, 2009, Study 2).

Hall et al. (2010) reported growth was directly related to distress ($r = 0.24$, $p < .001$). However this is a small effect size, and within their regression analysis PTG accounted for only 3.5% of the variance in distress once a number of other variables were also accounted for (age, gender, ethnicity, education, income, number of stressful events over last year and terrorism exposure) (R^2 , $F(1, 796) = 37.55$, $p < .001$). They also assessed for a curvilinear relationship between growth and distress, but did not find evidence of one. Growth was assessed using an unstandardised measure comprising of 6 items taken from COR, which was reported to be highly correlated with the PTGI ($r = .85$) and to have reasonable reliability and validity. This study was carried out immediately following the cessation of hostilities in “a war in a series of wars”. This

suggests that participants may have been exposed to chronic, ongoing threat and violence over many months and years.

Kleim and Ehlers (2009) carried out two studies. Although the first study was a prospective design, only a cross-sectional analysis was carried out in respect of the variables of interest for this review. Thus both studies reported upon cross-sectional findings for the relationship between growth and PTSD and depression. The first study was conducted six months post assault, and growth was positively associated with PTSD ($r = .43, p < .01$) and depression ($r = .35, p < .01$). For both associations a curvilinear relationship was found. Within the second study, which was carried out on average 39 months post-assault, PTSD was related to growth ($r = .53, p < .05$) but depression was not ($r = .02, ns$). The relationship between growth and PTSD was again curvilinear and in both studies, such that moderate growth was associated with higher symptom severity. The most notable difference between the two studies was variation in time since trauma.

One of the weaker studies in respect of the quality criterion, Lev-Wiesel, Amir and Besser (2005) reported a large, positive correlation between PTG and PTSD ($r = .53, p < .001$). The sample was female students, who had experienced sexual abuse in childhood, and the authors also investigated the impact or relationship to perpetrator upon distress and growth. Those who had experienced intra-familial sexual abuse reported higher PTSD symptoms and higher growth than those abused by a stranger. Within their regression model perpetrator identity and PTSD accounted for 33% of variance in levels of growth. The authors proposed that self-reported PTG in this sample may be a defence mechanism against distress.

Teodorescu et al. (2012) were the only study included to find that growth was significantly negatively correlated with posttraumatic stress ($r = -.352, p < .01$), depression ($r = .465, p < .001$) and also with a weak social network ($r = -.468, p < .001$). It was also significantly positively related to all quality of life indices used but no significant relationships were found with any demographic factors included. The sample included within this study was a clinical sample of refugees who had experienced mixed trauma types (with event exposure ranging from 2-15) and mean time since trauma was 18 years ($SD = 9$). This is arguably a heterogeneous sample, which may limit generalisability of findings.

The first of the four cross-sectional studies not to find a significant relationship between PTSD and growth was Shakespeare-Finch and de Dassel (2009), who performed strongly on the quality ratings however had the smallest sample ($N = 40$) of those included in the review. They reported a non-significant correlation between PTSD symptoms and growth ($r = .15, ns$) in survivors of CSA. However the PTSD subscales of hyperarousal and intrusions both had significant positive correlations with the PTGI total score ($r = .32, p < .05$; for both correlations), and the authors also reported significant correlations between different subscales of the growth and distress measures (hyperarousal with new possibilities and spiritual change; intrusions with new possibilities, appreciation of life and spiritual change, and the only negative relationship between avoidance with relationships with others).

Borja, Callahan and Long (2006) did not find a relationship between growth and PTSD ($r = .05, ns$), however this finding is from a partial correlation result which controlled for number of assaults which was reported to be significantly related to PTSD ($r = .50, p < .01$). The sample consisted of female college students reporting one or more sexual assaults. Although an average of 17 months since trauma is reported, this varied substantially ($SD = 17$; range = 1-66). This

study (which had robust quality ratings) took account of previous trauma history and there was no relationship between prior victimization or CSA and any of the dependent variables.

Powell et al. (2003), who received relatively low quality appraisals, also did not find a relationship between PTSD and growth ($r = .001$, *ns*), nor between growth and number of traumatic events ($r = .046$, *ns*). Although the sample is not split in respect of correlations, the authors report that refugees (who had spent a number of years abroad) reported significantly more growth than internally displaced persons. As with some of the previous studies, this was a mixed sample reporting high levels of trauma ($M = 19$) and although time since trauma is not specifically stated it appears to be many years for all participants.

The final cross-sectional study is Grubaugh and Resick (2007) who did not find a significant relationship between growth and PTSD ($r = .01$, *ns*) or depression ($r = -.13$, *ns*). This was a clinical, all female sample, of whom only 2% did not meet criteria for either PTSD or depression. Average time since trauma was $M = 137$ ($SD = 155$).

Prospective Studies

Four prospective studies were included within this review, and three of these demonstrated significant relationships. The first of these was Frazier, Conlon and Glasser (2001) who found that self-report of positive change at 2 weeks was significantly negatively correlated with depression ($r = -.50$, $p < .001$) and PTSD ($r = -.38$, $p < .001$). At 12 months positive change was significantly negatively correlated with depression ($r = -.35$, $p < .001$) but not PTSD ($r = -.09$, *ns*). In order to carry out longitudinal analyses the sample was split into four groups according to benefits reported (these were: gained; lost; never had, and always had positive change) and conducted ANOVAs to explore between group differences. Their findings suggest that those

who reported positive change across all time points were less distressed at 12 months than those who never reported positive change, and those who reported positive change and then lost it were as distressed as those who never reported it. Similarly those who reported negative change across time were more distressed than those who never reported negative change or who lost it. Although this study was rated as having the most robust methodological quality overall, it is important to note that the measure of growth (the Posttraumatic Life Change questionnaire) was specifically developed for the study but was unstandardised. Furthermore, participants entered and left the study at different time points, so there was not a single cohort being assessed which has implications for the validity of the longitudinal analyses.

The study by Kunst, Winkel and Bogaerts (2010) performed strongly against the quality criterion. They utilised stepwise regression to assess the impact of both revictimization and growth at T1, on PTSD at T2 (six months later) and found non-significant relationships. However the interaction between growth and revictimization did significantly predict PTSD at T2 ($\beta = .11$, $p < .05$). Victims with low levels of growth appeared to be more at risk of experiencing an increase in PTSD symptom severity following revictimization.

McMillen, Smith and Fisher (1997) in logistic regression found that lower perceived benefit at T1 (4-6 weeks) was related to higher PTSD at follow-up (three years later) ($B = -1.26$, $p < .05$; odds ratio = .28) across all disaster types and contributed to the model over and above gender, injury and pre-incident diagnoses. This study was the weakest of the four prospective studies in terms of the pre-defined quality criteria. As perceived benefit at T1 increased and exposure severity increased, recovery was improved. Within this study perceived benefits were reported qualitatively and coded for analysis.

In the final prospective study, Updegraff and Marshall (2005) reported that distress at T1 (7 days following trauma) was significantly and positively associated with growth at T2 (3 months later) ($\beta = .30, p < .001$), as were situational optimism ($\beta = .15, p < .05$) and dispositional optimism ($\beta = .27, p < .001$). Notably, after controlling for baseline levels, distress and dispositional optimism were not significantly related to growth at follow-up, however situational optimism was ($\beta = .32, p < .001$). They report that the data suggest it is initial levels of distress rather than changes over time which predicts growth.

Discussion

Synthesis of Main Findings

The main aim of this review was to explore the relationship between posttraumatic growth and distress, specifically within populations exposed to inter-personal trauma. Despite this review being more focussed in its remit than those conducted previously, there is wide variation in the findings of different studies reported here and heterogeneity is evident both within and between the studies on a number of variables. Inspection of the results does not indicate that study outcomes varied systematically as a function of trauma type, population characteristics, time since trauma, type of measures used or overall quality rating. The one exception to this is the fact that three out of the four cross-sectional papers which did not find a significant relationship between growth and distress utilised all female samples (see below for further discussion). Although growth is reported by participants in all studies it seems these reports may be somewhat lower than those given elsewhere. For example, Grubaugh and Resick (2007) reported average growth rates of $M = 64.04$ and state that this is comparable with other data sets. Most other studies included in the review reported lower rates of growth and it may be that there are features specific to interpersonal trauma which reduce the capacity or opportunity for growth in the same way that it increases the probability of clinically significant levels of distress.

It is notable that whilst only half of the cross-sectional studies established a relationship between growth and distress (and these varied in direction), three out of the four prospective studies found a significant positive relationship. The prospective studies may shed some light upon the inconsistencies in cross-sectional findings. In particular, Updegraff and Marshall (2005) found that over time, higher reported distress immediately following a trauma was related to increased

growth later (supportive of the cognitive model described earlier) and importantly that concurrent distress did not predict growth over and above baseline distress. Both Frazier, Conlon and Glasser (2001) and McMillen, Smith and Fisher (1997) found that that early benefit finding predicted lower distress at later assessment. Frazier, Conlon and Glasser (2001) also reported that early positive change was associated with lower distress only when those benefits were maintained over time. The one prospective study which did not find a significant relationship is Kunst, Winkel and Bogaerts (2010), who were looking specifically at individuals who had experienced revictimization. However they did find that the interaction between early growth and revictimization predicted later reports of PTSD, thus victims with lower levels of growth appeared to be more at risk of experiencing an increase in PTSD symptom severity following revictimization. The authors suggest that these findings may indicate that initial growth buffers against further distress following additional trauma. Overall, the prospective studies are suggestive that early endorsement of growth may be indicative of an adaptive coping strategy following interpersonal trauma which offers a protective function against future distress.

Only two of the studies reported assessing for evidence of a curvilinear relationship. Hall et al. (2010) did not find one, whilst Kleim and Ehlers (2009) did find a curvilinear relationship between growth and PTSD in both their studies, and depression in the first study. The existence of a curvilinear relationship between these variables may also partially account for the inconsistencies in cross-sectional studies, particularly if it is not regularly assessed for. For example, Teodorescu et al. (2012) was the only study to demonstrate a significant negative relationship between PTSD and growth and was one of only two studies assessing growth in a clinical sample. It is possible that within a sample such as this, where high levels of distress are reported, that the data captured is skewed towards one end of the distribution. Interestingly this

study also found a significant negative correlation between social networks and growth, which has previously been hypothesised as important in facilitating the recognition and endorsement of growth (Prati & Pietrantonio, 2009) and thus may have moderated the relationship between growth and distress in this sample.

Shakespeare-Finch and de Dassel (2009) were the only study to report upon subscale correlations. In spite of their small sample size, and the lack of a significant relationship between total scores, they did report significant positive relationships of moderate effect size between both hyperarousal and intrusions with the growth total. This finding suggests the possibility that certain facets of PTSD may be more closely associated with growth than others, which again may lead to possible inconsistencies across studies depending upon the tools used to measure posttraumatic distress. It has previously been hypothesised that greater levels of intrusions following trauma can, under the right circumstances, lead to greater deliberate rumination which facilitates growth (Lindstrom, Cann, Calhoun & Tedeschi, 2011).

Methodological Limitations and Theoretical Implications

It is clear that many of the methodological and conceptual issues described in previous reviews, and outlined in the introduction, are yet to be addressed. The operationalising and measurement of growth is an issue affecting all the studies included. Every study measures growth via retrospective self-report. This has been outlined previously as an important consideration for the development of the posttraumatic growth literature and some researchers have begun to explore methods which address this (e.g. Shakespeare-Finch & Enders, 2008). When providing self-report of growth individuals are required to consider their functioning retrospectively, as opposed to self reports of distress which are current. Although growth may be considered to be

more “authentic” if it is reported some time after the traumatic event (as outlined in the introduction), recall bias is likely to increase with longer times since trauma. Similarly positivity bias, whereby negative answering is not possible, is an issue affecting all current standardised growth measures (Bostock, Sheikh & Barton, 2009).

Also potentially impacting upon the study outcomes and evidence-base is that of substantial heterogeneity regarding trauma type, trauma characteristics and time elapsed, both within and across studies. Many studies failed to either assess or control for these variables, and this variation is likely to impact upon their internal validity. A related point is the lack of assessment of the perceived severity of the traumatic event. In view of the cognitive model of growth (Tedeschi & Calhoun, 1996) an individual’s cognitive appraisal of the event at the time may be critical to growth outcomes later. Providing some support for this, Updegraff and Marshall (2005) found that objective trauma severity was not associated with growth, lending support to the premise that it is not the event per-se that results in growth.

Furthermore, most studies did not assess for prior trauma history. This may be particularly relevant when exploring growth outcomes, given the hypothesised mechanism for growth in some of the theoretical models. Calhoun and Tedeschi (2006) emphasise the shattering of core beliefs that can follow a trauma as being central to the subsequent growth process. If individuals have experienced previous traumas, it may be reasonable to assume that subsequent trauma may not serve the same belief shattering function if an individual’s view of the world has already been altered to accommodate such events. One might therefore expect growth to be more limited, and not display the same relationship with distress. The impact of revictimization on the relationship between growth and distress highlights this (Kunst, Winkel & Bogaerts, 2010). This issue also leads to the question of whether benefit finding related to a trauma such as childhood

abuse can be conceptualised as “growth” resulting from the traumatic experiences, as there is not the same baseline functioning with which one can compare post-trauma functioning.

Previous reviews have shown that there are a wide range of further confounding variables that impact upon the development of growth and the relationship between growth and distress. These include: cognitive appraisal; socio-demographic variables; personality traits; coping/social support/religion and quality of life (Linley & Joseph, 2004), and neuroticism; positive reappraisal; acceptance and denial (Helgeson, Reynolds & Tomich, 2006). Although some studies included in this review accounted for one or more of these variables in their analysis, there are insufficient numbers to include a review of the outcomes here. The high potential for confounding variables within this branch of research means it is more difficult to identify causality.

A final issue impacting upon the evidence base presented here is that of gender bias. Five of the included studies (one prospective) utilised an all female sample, which clearly limits generalisability of findings. It is well-documented that females are more prone to developing PTSD (even after controlling for trauma variables) (Tolin & Foa, 2008), so it is feasible women may also report higher levels of other post-trauma outcomes. This is supported by Hall et al. (2010) who reported women endorsed higher levels of growth than their male counterparts, in one of only a few studies which had an even gender split within the sample.

The methodologies employed by the studies in this review present some potentially important implications for the theoretical models of growth. Zoellner and Maercker (2006) suggest that different cognitive factors may be at work in PTG at different stages of the coping process. However there remains a discrepancy between the idea that growth requires time to develop in

order to be considered “authentic” (Teodorescu et al., 2012) and the fact that a number of the studies reviewed here found the majority of participants reporting growth soon after the traumatic incident. The picture therefore remains unclear as to whether growth is best understood as process, outcome or both, and how these might be differentiated. Additionally, there is a question regarding what are considered to be the salient features of an event that are conducive to growth. It has been argued previously (and highlighted above) that a high level of perceived severity of the event is required in order to allow for the re-assessment and re-building of core beliefs (e.g. Janoff-Bulman, 2004). Although not the focus of this review, there is some evidence from the studies presented here to suggest that, in addition to the shattering of beliefs, individuals may also then require subsequently high levels of social support and validation in order to facilitate this re-building (McMillen, Smith & Fisher, 1997; Teodorescu et al., 2012).

Limitations of this Review

It is important to be aware of the limitations of this review when considering the implications of its findings. It was beyond the scope of this review to include search strategies for unpublished papers, and it is worth noting that the database and journal searches yielded a high number of dissertation abstracts which appeared to be relevant to the review question. Publication bias (greater reporting of positive findings) is a well known risk when looking at the evidence base for a given subject and this is a limitation which future reviewers should look to address. Similarly it was not possible (within the author’s time frame) to contact authors for further information relating to their studies which may have influenced quality ratings, and thus affected the overall conclusions drawn. Thirdly, despite the relatively narrow focus of the review question there remains wide variation in trauma type and characteristics experienced by participants across the studies. It could be argued that this is not a sufficiently homogenous

population to allow for valid comparison across studies, and may limit generalisability of any conclusions.

Implications for Future Research and Clinical Practice

Both the wider literature and the findings of this review indicate that there is not a clear cut relationship between the constructs of posttraumatic growth and posttraumatic distress. Further development of the theoretical underpinnings and operationalising of the construct of posttraumatic growth, along with more robust methodologies, are necessary to develop understanding in this area. It is positive that a third of the studies included here were prospective, and this is something which can be built on further with longitudinal, pre- and post-study design. Large sample sizes to ensure power for more complex analyses would assist understanding of complex relationships (e.g. curvilinear). It would be of value for researchers to take greater account of participant's prior trauma history and trauma characteristics.

In terms of the clinical implications of this research, it has already been highlighted that it is important for clinicians to be aware of the potential for growth as well as distress following traumatic events, and to explore and facilitate this process where appropriate (Helgeson, Reynolds & Tomich, 2006). In addition to this point it is also worth noting the apparent importance of positive, early supports in fostering the potential for growth and protecting against the development of later distress (Frazier, Conlon & Glasser, 2001). This lends support to the idea of the provision of 'psychological first aid' in the immediate aftermath of potential traumatic events, which includes physical care, information provision, comfort and emotional support (e.g. Lewis et al., 2013). This is further substantiated by another three studies: McMillen, Smith and Fisher (1997) identified the main area of growth (following community

disasters) as being closeness to others; Borja, Callahan and Long (2006) highlighted the impact of formal/informal social reactions following sexual assault and their impact on later coping, and it has been observed that having a role model who had experienced growth following domestic violence increased the likelihood of self-reported growth (Cobb, Tedeschi, Calhoun & Cann, 2006).

Conclusions

Posttraumatic growth is reported by individuals who have experienced interpersonal trauma, of both single-incident and chronic type traumas, and is reported concurrently with posttraumatic distress. As in previous reviews, the literature reviewed here does not demonstrate a clear cut relationship between levels of posttraumatic distress and posttraumatic growth, particularly within cross-sectional analyses. Prospective studies offer some evidence that reported growth immediately following a trauma may be predictive of later growth and distress, however the small number of studies prevents firm conclusions from being drawn. Future researchers need to address the key issue of corroborating retrospective, self-reported growth with additional evidence, as well as tackling the theoretical issues of what is being measured. It may be of value to consider how social support and ‘psychological first aid’ following trauma can be promoted by clinicians within services and communities.

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Chapter 3 – Background and Theory Related to

Empirical Research Project

The aim of this chapter is to provide further information relating to the empirical research project than can be provided within a research journal article. It outlines the background research into the effects of sexual abuse, the current conceptualisation of complex trauma presentations and the theoretical models of forgiveness and self-compassion based interventions.

Childhood Sexual Abuse

Childhood sexual abuse (CSA) is a subject which has garnered increasing attention in recent years, both in mainstream media and within the scientific community. Despite the overriding societal view that CSA is unacceptable, prevalence nonetheless remain high. In their study of internationally reported prevalence rates, Pereda, Guilera, Forns and Gomez-Benito (2009) found significant variation amongst studies. They conclude however that overall the most frequently reported prevalence rate of CSA for men is below 10%, while for women the rate is between 10% and 20%. In the USA rates for men and women have been reported as 14.2% and 32.3% respectively (Briere & Elliot, 2003), and in the UK reported prevalence rates are 11% for boys and 21% for girls (May-Chahal & Cawson, 2005).

Part of the reason for the wide range of reported prevalence is due to methodological variation in data collection, and also to the definition of CSA used. As yet there is no internationally agreed standard for what is considered to meet the criteria for CSA, or the best way of assessing this. Many studies use the definition: “either contact or non-contact sexual experiences between a person under 18 years of age and an adult or other person at least 5 years older; or sexual

experiences resulting from coercion, no matter what the age of the other person.” (Pereda, Guilera, Forns & Gomez-Benito, 2009; p.337). However cultural standards play an important role in shaping what is viewed as sexual abuse. In the UK the age of consent is 16 years, which would be at odds with the above definition.

The following is taken from the NHS Highland & The Highland Council Policy Supporting Adult Survivors of Child Sexual Abuse (Gunn & Paton, 2009), and is stated as being in keeping with Scottish government recommendations:

“Any child below the age of 16 years may be deemed to have been sexually abused when any person(s), by design or neglect, exploits the child, directly or indirectly, in any activity intended to lead to sexual arousal or other forms of gratification of that person or any other person(s) including organised networks. This definition holds whether or not there has been genital contact and whether or not the child is said to have initiated, or consented to, the behaviour” (p. 3)

The policy goes on to acknowledge that there may be instances when teenage young people, (under 16 years) engage in sexual activity with another young person of a similar age, under circumstances which would not be considered to meet the criteria of CSA. This caveat again outlines the difficulty in generating a universally acceptable definition. The policy was developed in response to the recognition that all members of staff need to be equipped to recognise indicators of CSA and respond appropriately. This is due to the fact that an experience of CSA is understood to potentially have wide reaching consequences in all areas of health and social care. Maniglio (2009) carried out a review of reviews, looking at the reported health outcomes for people reporting experiences of CSA. The conclusion was that CSA is a non-

specific risk factor for a wide-range of behavioural, psychological, physical and sexual disorders. These included but were not limited to: psychotic symptoms; personality disorders; eating disorders; high-risk sexual behaviour; social impairment; interpersonal problems; non-epileptic seizures and revictimization.

Given the high prevalence of CSA, the range of negative outcomes associated with it and the complex interactions between variables, it is clearly incumbent upon researchers to investigate the effectiveness of interventions with this population. Taylor and Harvey's (2010) meta-analysis of psychotherapy with adult survivors of CSA generally found moderate effect sizes related to a wide-range of outcome measures in the domains of posttraumatic stress disorder (PTSD) and trauma symptoms, internalizing and externalizing symptoms, self-esteem and global symptoms and function (the exception was interpersonal functioning). Similar results were also reported in a review by Peleikis and Dahl (2005).

Although these results are encouraging, caution is warranted in generalising to wider clinical populations. It is not clear, for example, how many participants met clinical cut-offs for psychological difficulties, or how comparable sample demographics and abuse characteristics are to general clinical samples. The stated aim of many of the research trials is reported as 'treatment of CSA' (Taylor & Harvey, 2010), which does not necessarily indicate that what was being measured was the main presenting problem(s). The authors conclusions are that despite encouraging evidence for the use of psychotherapy with adult survivors of CSA, much more research is needed to specify 'what works for whom'.

Complex Trauma

As described above, the types of experiences which may be classified as CSA vary markedly, and the range of associated problems patients present with is extensive. Although some survivors difficulties may best be understood in terms of specific, discrete problems (such as depression, anxiety or PTSD), for others the wide ranging nature of their difficulties may be better understood within the framework of what is often termed “complex trauma”. The definition of the types of experiences which are referred to as constituting complex trauma have varied, but can be understood as prolonged exposure to repeated or multiple forms of trauma, which is usually interpersonal in nature, and from which escape is not possible (Resick et al., 2012). The term ‘complex posttraumatic stress disorder’ (CPTSD) was first coined by Herman (1992) to describe the range of difficulties often observed in those who had been exposed to complex traumas. CPTSD is understood to include the usual symptoms associated with PTSD (re-experiencing, avoidance and hyperarousal), but to also include a wide range of additional difficulties which can broadly be described as emotional dysregulation and impaired inter- and intra-personal relating (Cloitre et al., 2009).

It is interesting to note that following much debate CPTSD has not been included in the most recent edition of the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5; American Psychiatric Association, 2013). The issues relating to this debate are outlined in the Journal of Traumatic Stress special edition (e.g. Resick et al., 2012; Herman, 2012). The debate primarily focuses on the validity and utility, or otherwise, of recognising CPTSD as either a discrete diagnostic criteria or as part of a spectrum of PTSD. Regardless of diagnostic categories, there does appear to be robust evidence showing prolonged, multiple traumas, particularly when occurring in childhood, result in more complex and severe presentations of

psychopathology (e.g. Cloitre et al., 2009; Kaysen, Resick & Wise, 2003) and that functional impairment extends beyond what is accounted for by PTSD symptoms (Cloitre, Miranda, Stovall-McClough & Han, 2005). In terms of clinical significance, figures suggest that within trauma samples CPTSD is more common than single-incident PTSD (Herman, 2012). This is supported by a snapshot audit carried out by NHS Greater Glasgow and Clyde (Svanberg, Bonney & McNair, 2011) which showed that 66% of patients presenting to psychology addictions services met the definition for Type II/complex trauma compared to 9% for Type I/PTSD.

There are a number of theoretical models which have been drawn upon in understanding the difficulties experienced by those exposed to complex trauma. Theories relating to the development of PTSD are clearly also applicable to CPTSD. Symptoms associated with PTSD have been hypothesised to develop due to the failure to successfully ‘process’ the traumatic memory (Foa & Kozak, 1986; Ehlers & Clark, 2000). Attachment theory emphasises the need for young children to have a safe, stable relationship with a responsive caregiver for optimal development. It is argued that in situations where a secure attachment is not available, or is interrupted, there can be profound and long-lasting consequences on the unconscious representation of the self and others (Pearlman & Courtois, 2005). In a similar vein, developmental theory suggests that the acquisition of the key skills of affect regulation and interpersonal relating is disrupted when there is exposure to chronic abuse in childhood (Cloitre, Miranda, Stovall-McClough & Han, 2005). In Betrayal Trauma Theory ‘high-betrayal’ abuse occurs in situations where the abuse is perpetrated by a care-giver or primary attachment figure (Reichmann-Decker, DePrince & MacIntosh, 2009). In this situation childhood abuse is hypothesised to result in alterations to information processing and emotion response

mechanisms, which allows the child to remain engaged in the relationship and maximise the chances of receiving care. Finally, there is evidence that chronic abuse in childhood leads to specific neurobiological alterations which can be resistant to change and which impact upon management of affective states (Neigh, Gillespie & Nemeroff, 2009). Taken as a whole, what these theories indicate is that for a child living within an abusive context critical aspects of development are impacted by the need to both cope with the abuse itself and also maintain a relationship with a caregiver who is required to meet needs but is also the source of the abuse (or failing to prevent it).

Although effective cognitive-behavioural therapies for trauma have been designed specifically for the treatment of PTSD symptoms in traumatized populations (e.g. Foa, Hembree & Rothbaum, 2007), these treatments do not address the affective and interpersonal difficulties associated with complex trauma (Cloitre et al., 2010). Based upon both the theoretical models of CPTSD, and the empirical evidence relating to presenting problems following complex trauma, proposed treatment protocols have emphasised a relational, sequenced approach to interventions for CPTSD. This approach emphasises first the establishment of safety and stability, followed by the processing of traumatic memories and emotions and finally consolidation of gains and moving forward (Ford et al., 2005; Courtois & Ford, 2012). The remainder of this chapter considers the theoretical models and evidence for self-compassion and forgiveness based interventions, and examines their potential utility in treatment for difficulties associated with a history of CSA.

Forgiveness

At first glance it may be counter-intuitive to suggest that forgiveness following interpersonal trauma, particularly CSA, is something to be encouraged or fostered therapeutically. Is there a risk, in promoting forgiveness, of undermining or invalidating the hurt that was caused, and in doing so colluding with distorted cognitions of self-blame? Interpersonal forgiveness has been defined as “...an unjustly hurt person's act of deliberately giving up resentment toward an offender while fostering the undeserved qualities of beneficence and compassion toward that offender” (Freedman & Enright, 1996; p.983). Enright and colleagues have conceptualised forgiveness as occurring within an interpersonal context and it is claimed that the choice to forgive reduces the ascendancy of negative elements of one's response to the injustice, and increases a neutral or even positive stance to the perpetrator. There are several key elements to this definition: that the hurt was “unjust” (thus placing responsibility with the perpetrator); that the forgiving party is taking an empowered decision to forgive, and that they are nurturing their own preferred and desired qualities. Forgiving here is conceptually distinct from forgetting, condoning, excusing or reconciling.

Other researchers in the area of forgiveness have presented alternative conceptualisations. Snyder & Heinze (2005), for example, offer a theoretical stance which suggests that forgiveness can be directed toward the self, the other or a situation. They state it involves the adaptive framing of the transgression so that one is no longer constrained by a negative attachment to it, and hypothesise that a lack of forgiveness in abuse survivors may fuel PTSD symptoms through this negative mental bond, and inability to “let go”. There may be benefits in extending the understanding of forgiveness beyond the interpersonal, as similar patterns of response (resentment, anger, betrayal) may be seen in abuse survivors towards the self or the situation

which “allowed” the abuse to occur. The “adaptive framing” may have a similar function as the “choice” suggested by Enright and colleagues. Finally, Bono, McCullough and Root (2007) suggest that forgiveness has an adaptive, “pro-social” function in improving (by maintaining or restoring) close interpersonal relationships. Whilst this might provide an evolutionary perspective on the adaptive significance of forgiveness it can be argued to limit the applicability to forgiveness theory in situations where the maintenance or restoration of the relationship is not desired, nor would it be beneficial to the forgiver.

In terms of the therapeutic relevance of forgiveness following trauma, a detailed Process Model of Interpersonal Forgiveness has been developed (Enright & Rique, 2004). This model includes 4 key phases of: Uncovering; Decision; Work and Deepening. Briefly, these phases address the recognition and acknowledgement of previous defensive strategies, along with awareness of true feelings and responses to the transgression. With this recognition comes the opportunity to take the decision to respond in a more productive way, with forgiveness being a possible choice. When a commitment to forgiving is made, work can be undertaken to explore motivations to forgive and includes cognitive reframing as an integral part of this stage. Finally there is the exploration of personal meaning and how to move forward with one’s life. These stages can be seen to have distinct parallels with the phase-based approach for complex trauma (Courtois & Ford, 2012). Meta-analysis has provided evidence for the efficacy of forgiveness interventions with clinical populations in reducing psychopathology and increasing well-being (Baskin & Enright, 2004).

Self-Compassion

The concept of self-compassion was operationalised as a psychological construct by Neff (2003a). Drawing upon Buddhist principles and following in the wake of so-called ‘third wave’ therapies, such as Acceptance and Commitment Therapy (ACT; Hayes et al., 1996) and Mindfulness-based interventions (Teasdale et al., 2000), Neff presented the cultivation of self-compassion as being a key component in psychological well-being. She defined self-compassion as:

“...being touched by and open to one’s own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one’s suffering and to heal oneself with kindness. Self-compassion also involves offering nonjudgmental understanding to one’s pain, inadequacies and failures, so that one’s experience is seen as part of the larger human experience.” (Neff, 2003a; p.87).

The above definition contains the three components Neff considers to be key to the useful application of self-compassion in the face of one’s own suffering: self-kindness; recognition of a common humanity and mindfulness. These three aspects are conceptually distinct but interact to form a larger, over-arching construct. Self-compassion is presented as having important conceptual differences to self-esteem, which is proposed to have pitfalls associated with being intrinsically value-laden, and requiring comparative judgements. This is opposed to self-compassion which promotes the adoption of an accepting, non-judgemental approach to one’s experiences. Important distinctions are also made between self-compassion and self-pity or self-indulgence. Rather than ignoring or being overly identified with one’s weaknesses or problems,

a more balanced and productive approach can be cultivated. In these ways a self-compassionate approach can be viewed as an adaptive, emotion-focussed coping strategy (Neff, 2003a).

The theoretical underpinnings of the relationship between self-compassion and psychological distress have been further developed by Gilbert and colleagues (e.g. Gilbert & Proctor, 2006). They have hypothesised that high levels of shame can result in both the internal and external world being perceived as hostile and threatening, thus activating the neurological threat/arousal systems. Shame is reported to be related to an inability to give warmth, soothing and reassurance towards the self. Conversely, self-compassion is hypothesised to activate the soothing, care-giving system and thus simultaneously deactivate the threat/arousal system. This has the potential to have important implications for those recovering from exposure to complex trauma and its associated difficulties. It is suggested that “we can learn to identify with compassion as a self-desirable quality...and seek to take *action* to promote compassion.” (Gilbert & Proctor, 2006; p. 358).

A self-compassionate approach may best be understood as a particular orientation or way of being. Developing an attitude of compassion towards oneself would ideally permeate all aspects of one's life, rather than focussing solely upon the amelioration of symptoms of psychopathology. Rather than attempting to get rid of unpleasant internal states, greater psychological well-being is achieved through the willingness to accept the negative. To date two intervention programmes aimed at the development of greater self-compassion have been put forward – the Mindful Self-Compassion programme (Germer & Neff, 2013) and Compassionate Mind Training (Gilbert & Proctor, 2006). Although more research is warranted, both approaches demonstrated a significant increase in levels of self-compassion and reduction of anxiety, depression and other negative symptomatology.

Thesis Research Aims and Hypotheses

The main aim of this study is to investigate levels of self-reported forgiveness and self-compassion within a clinical sample of adult survivors of childhood sexual abuse, and to explore the relationships between these and the trauma associated variables of posttraumatic stress symptoms, dissociation and self-blame.

In order to investigate these aims the following hypotheses were generated:

- Hypothesis 1 - in keeping with previous research, posttraumatic stress symptoms will positively correlate with dissociation and self-blame;
- Hypothesis 2 - posttraumatic stress symptoms, dissociation and self-blame will correlate negatively with offense-specific, interpersonal forgiveness
- Hypothesis 3 - posttraumatic stress symptoms, dissociation and self-blame will correlate negatively with the self-compassion.

Chapter 4 – Empirical Research Project

An Investigation of Distress, Self-Compassion and Forgiveness in a Clinical
Sample of Adult Survivors of Childhood Sexual Abuse.

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Word count (excluding abstract, references and appendices) – 8,304 words

Abstract

Objectives: Childhood sexual abuse (CSA) is associated with a wide range of negative outcomes in adulthood. The current evidence base for therapeutic interventions with this population is limited. Research suggests that the theoretical models of forgiveness and self-compassion offer potentially meaningful additions to working with survivors of CSA. To date there has been limited exploration of these constructs with this population. The main aim of this study was to explore the relationships between posttraumatic stress symptoms, dissociation and self-blame with self-compassion and forgiveness in a clinical sample of CSA survivors. **Methods:** A clinical sample of adult survivors of CSA (N = 19) were recruited from adult mental health services across Scotland, took part in the study. All who took part completed measures of posttraumatic stress symptoms, dissociation, self-blame, forgiveness and self-compassion. **Results:** In this sample posttraumatic stress symptoms were positively correlated with dissociation and self-blame. Forgiveness was found to be positively correlated with dissociation, but unrelated to posttraumatic stress or self-blame. Negative correlations between self – compassion and trauma outcomes were found, however they did not reach significance in this sample. **Conclusions:** The small sample size limits the conclusions which can be drawn, however results suggests there may be value in exploring the operation of these constructs within this population further.

Abstract Word Count - 210

Keywords: “childhood sexual abuse”; “forgiveness”; “self-compassion”; “posttraumatic stress”

Introduction

Risk Factors and Outcomes following Childhood Sexual Abuse

Survivors of childhood sexual abuse (CSA) are reported to be at higher risk than any other trauma type for developing post traumatic stress disorder (PTSD) symptoms (Stovall-McClough & Cloitre, 2006). Additionally it has been well-documented that an experience of CSA is a risk factor for a wide range of presenting difficulties in adulthood which extend beyond the diagnostic criteria for PTSD. These difficulties include: poor affect regulation; dissociation; recurrent depression and anxiety; deficits in social skills; self harm and suicide attempts; eating disorders; somatisation; volatile inter-personal relationships; a disrupted sense of self; distorted core beliefs, and revictimization (Lev-Wiesel, 2008; Pearlman & Courtois, 2005).

It is increasingly the case that some researchers are concluding the current conceptualisation of PTSD, which is applicable following a single incident trauma such as a road traffic accident or mugging, falls short of being able to fully account for the range, and severity, of difficulties presented by those who have experienced more complex forms of trauma. Complex trauma is understood to occur in situations of prolonged, chronic and/or multiple traumatisation, which is usually interpersonal in nature and from which escape is not possible (Resick et al., 2012). These types of experiences give rise to what has been termed by many researchers as complex posttraumatic stress disorder (e.g. Herman, 1992). Complex PTSD is understood to incorporate not just posttraumatic stress symptoms (of hyperarousal, avoidance and intrusions), but also deficits in the three key areas of emotion regulation, development of self concept and interpersonal functioning.

Given the wide range of problems and skills deficits that accompany complex trauma reactions (such as those found in many survivors of CSA presenting to mental health services) it has been argued that treatment must address the developmental and relational difficulties in addition to symptoms of PTSD (Pearlman & Courtois, 2005). Although a phased intervention programme has been proposed (Courtois & Ford, 2012), there remains a significant gap in the current literature with regard to evidence-based treatment for complex PTSD (e.g. NHS Education for Scotland, 2011). Not all experiences of CSA would be considered a complex trauma, and not all complex traumas will result in Complex PTSD. Nonetheless, when looking at treatment needs of survivors of CSA it is important that the additional difficulties associated with complex trauma are accounted for and addressed.

In order to better elucidate the mechanisms by which CSA leads onto such diverse and, for some, debilitating outcomes, researchers have explored a wide range of factors hypothesised to influence coping, resilience and recovery. Two recent reviews of reviews have both concluded that CSA is a general, non-specific risk factor for later outcomes (Hillberg, Hamilton-Giachristis & Dixon, 2011; Maniglio, 2009). Both these papers investigated the quality and findings of reviews looking at the association between CSA and adult mental health (AMH) difficulties. They concluded that, contrary to other reports in the literature, there is as yet no consistent evidence that abuse characteristics influenced outcomes following CSA. The conclusions drawn remain tentative however due to a number of methodological limitations across studies, substantial heterogeneity, evidence of publication bias and variation in categorization of variables. In both reviews methodological quality of studies and sample characteristics appeared unrelated to results.

What these findings suggest is that CSA does not operate independently to lead to the difficulties outlined above. Rather, an experience of CSA in conjunction with certain additional risk factors will result in a wide range of future outcomes. Research has thus moved to focus upon identifying those risk factors which have a direct causal relationship to distress, and more specifically identifying those factors which may be amenable to change. Whiffen and MacIntosh (2005) in a review of the literature looking at mediating factors between CSA and adult emotional distress suggest there is some evidence for the mediating effects of shame/self-blame, interpersonal difficulties and the use of avoidant coping strategies. As small numbers of studies were used to investigate each variable, these results should be considered preliminary.

Self-Compassion

The concept of compassion has existed for thousands of years, is most commonly associated with eastern (specifically Buddhist) practices and has only relatively recently begun to be explored scientifically (Gilbert, 2010). Compassion has been described as a recognition of another's suffering, and being moved to act in order to alleviate that suffering (MacBeth & Gumley, 2012). By extension the application of compassion to oneself, self-compassion, has been defined as "being touched by and open to one's own suffering, not avoiding or disconnecting from it, generating the desire to alleviate one's suffering and to heal oneself with kindness" (Neff, 2003a).

In developing the Self-Compassion Scale (SCS), Neff (2003b) identified the construct as consisting of three core characteristics: an attitude of kindness and understanding to one's self; perceiving one's experiences as part of the larger human condition, and cultivating a mindful awareness of painful experiences without over-identifying with them. In a recent meta-analysis,

MacBeth and Gumley (2012) found that within 20 studies looking at the relationship between compassion and mental health outcomes, all used the Self-Compassion Scale (SCS; Neff, 2003b) as the compassion measure. They found large effect sizes for the relationship between increased self-compassion and lower depression, anxiety and stress scores. This was not found to vary as a result of sample characteristics, gender or age. These findings suggest the concept and theoretical construct of self-compassion may have utility in further mental health research. Importantly, self-compassion has been demonstrated to be conceptually distinct from the related concept of self-esteem (a construct which implicitly requires a value judgement about the self), and experimental evidence suggests it is endorsed not merely in the absence of negative affect (Neff, Kirkpatrick & Rude, 2007).

It may be hypothesised that the development of a compassionate relational stance towards oneself could enhance coping and recovery following CSA through a number of mechanisms. Firstly, Gilbert and Proctor (2006) argue that self-compassion may be related to the ability to activate self-soothing neurological systems (and thus deactivate threat focussed systems) and internally regulate emotional states; something which is acquired in normal development through the learning experiences of being soothed by a caring and responsive adult but which may be under-developed in situations where such learning was not available. Secondly, avoidance has been argued to be key in both maintaining PTSD symptoms following trauma (Foa & Kozak, 1986) and also in being the common component in the range of outcomes following complex trauma (Briere, Hodges & Godbout, 2010). Mindful awareness has been described as “a way of meeting traumatic memories without getting swallowed up in them” (Germer, 2009; p.78). Thus, a mindful approach to one’s experiences could therefore be viewed as facilitating processing of traumatic events by reducing avoidant coping strategies which are understood to

maintain symptoms. Finally, an understanding of one's suffering as being a source of connection with others, and part of a shared humanity, has been proposed to engender improved interpersonal relationships (Neff, 2003a).

To date there appears to be little research looking at this construct with either survivors of CSA specifically, or following exposure to other traumatic events. Thompson and Waltz (2008) investigated the relationship between self-compassion and PTSD symptoms within a student population. Their study demonstrated a significant negative correlation between the total SCS score and the avoidance subscale of the PTS Diagnostic Scale (PDS) (Foa, Cashman, Jaycox & Perry, 1997). This finding is in keeping with the idea that self-compassion fosters the ability to be in contact with one's negative experiences (rather than avoiding them).

Another study investigated the relationship between self-compassion and emotional dysregulation in a group of young adults seeking treatment for substance misuse, who had past histories of childhood maltreatment (including CSA) (Vettese, Dyer, Li, & Wekerle, 2011). The outcomes of this study indicated that self-compassion made a unique and significant contribution to levels of emotional dysregulation even after controlling for childhood maltreatment, addiction severity and current level of psychological distress. However it is noted that the majority of the sample reported low to medium severity of abuse and were also motivated with regard to seeking treatment. Further investigation is required to confirm this relationship generalises to other populations, such as those with more severe abuse histories. Although the evidence in this area is in its infancy, what research there is provides preliminary support for the further exploration of this construct with survivors of CSA.

Forgiveness

Interpersonal forgiveness has been defined as “...an unjustly hurt person's act of deliberately giving up resentment toward an offender while fostering the undeserved qualities of beneficence and compassion toward that offender” (Freedman & Enright, 1996; p.983). Key to this definition is that forgiveness is viewed as a choice that is made by an individual, and it follows an acknowledged experience of great hurt. Enright and colleagues have conceptualised forgiveness as only occurring within an interpersonal context and it is claimed that the choice to forgive reduces the ascendancy of negative elements of one's response to the injustice, and increases a neutral or even positive stance to the perpetrator. Distinctions are made between forgiveness and the similar but conceptually different acts of condoning, excusing, reconciling and forgetting (e.g. Baskin & Enright, 2004). These distinctions, and the view of forgiveness as an empowered choice, are important in considering its applicability with those who have experienced complex, childhood trauma.

Within the theoretical model, forgiveness is understood to require the individual who has experienced an interpersonal transgression to be willing to come into contact with, work through and ultimately choose to let go of painful experiences (Orcutt, Pickett & Pope, 2005). This description appears to have distinct parallels with exposure interventions for PTSD and there is evidence that lower PTSD symptoms are associated with higher levels of forgiveness in military veterans (Witvliet, Phipps, Feldman & Beckham, 2004). The specifically interpersonal focus and the conscious decision to let go of the negative bond to the perpetrator(s) may be of particular relevance and value following CSA. Given that forgiveness requires a recognition that great hurt was caused and beneficence is “undeserved”, the development of a forgiving stance may be hypothesised to facilitate a cognitive shift from self-blame and the associated guilt and/or

shame, to one which recognises the responsibility as belonging to the perpetrator. This shift has previously been described as key in recovery from CSA (Chouliara, Karatzias & Gullone, 2013). Forgiveness could be considered to have the potential to both validate the hurt which was caused and also give the survivor the option of transcending the understandable desire for retribution, while simultaneously cultivating their own strengths and desired qualities. Meta-analysis of nine empirical studies has suggested that forgiveness interventions may be effective in reducing emotional distress (Baskin & Enright, 2004). This review included one study with CSA survivors which found that, compared to wait-list controls, participants demonstrated significant reductions in anxiety and depression, as well as increased forgiveness and hope, and gains were reported to be maintained at 1 year follow-up (Freedman & Enright, 1996).

To date there is limited research investigating the concept of forgiveness with survivors of CSA. One study, which included a sub-group of CSA survivors, investigated the relationship between offense-specific forgiveness and PTSD symptoms in a trauma exposed, student sample (Orcutt, Pickett & Pope, 2008). They found that overall, and as hypothesised, PTSD was negatively associated with forgiveness. However in contrast to this, within the sub-group who reported CSA as their most traumatic event ($N = 29$), higher levels of forgiveness were associated with higher levels of PTSD symptomatology ($r = .16$) and the relationship increased in strength after controlling for the effects of gender and perceived severity ($r = .32$). The data presented does not offer any clear explanation for why this is the case. The authors themselves point out that although one may hypothesise that perhaps forgiveness of trauma experienced as a child does not confer the same benefits due to developmental issues, the strongest negative partial correlation between forgiveness and PTSD was for the group who endorsed witnessing family violence as a child as their most traumatic experience. This anomalous finding may warrant further

investigation. In contrast, Snyder and Heinze (2005) found that following childhood abuse, situational- and self-forgiveness mediated the relationship between PTSD and hostility, but this relationship did not hold for inter-personal forgiveness, and they did not identify any differences between those who experienced sexual as opposed to physical abuse. Both studies sampled comparable student populations, however different forgiveness measures were used, and it may be that variation the definition and operationalising of the over-arching variable of forgiveness contributed to the difference in outcomes.

Dissociation and Self-Blame

As has already been discussed, for survivors of CSA the outcomes following such an experience can have a profound impact on adult functioning. Theorists have suggested that this may be accounted for, at least in part, by the fact that for a child living within an abusive context, critical aspects of development (such as self-concept and emotion regulation) are impacted by the need to both cope with the abuse itself and also maintain a relationship with a caregiver who is required to meet needs but is also the source of the abuse (or failing to prevent it). It has been hypothesised that certain coping strategies may facilitate the maintenance of this ambiguous relationship, particularly dissociation and self-blame (Barker-Collo & Read, 2003; Chu & DePrince, 2006).

Dissociation can be understood as an extreme form of avoidant coping, whereby the individual detaches themselves from reality rather than be in contact with negative experiences, including thoughts, feelings and memories as well as actual abuse experiences. Although protective at the time of the abuse, the continued use of dissociation as a coping strategy following trauma is hypothesised to prevent processing of the traumatic events and thus maintain difficulties (Talbot,

Talbot & Tu, 2004). Lev-Wiesel (2008) states that around 80% of survivors of CSA meet the criteria for dissociative disorders, compared to only 50% reporting PTSD.

Self-blame can be understood as being the cognitive correlate of the affective state of shame (Gilbert & Proctor, 2006) and self-blame attributions have been reported to create, maintain and exacerbate PTSD symptoms following trauma (Massad & Hulsey, 2006). Within a CSA population they have been shown to mediate a wide range of outcomes, such as depression, anxiety and self-esteem (Daigneault, Tourigny & Hebert, 2006). In adults with a history of childhood trauma, cognitive distortions were the strongest predictor variable of trauma symptoms when compared with attachment and abuse characteristics, and of the Cognitive Distortion subscales, that of Self-Blame had the highest factor loading (Browne & Winkelman, 2007).

Interpersonal difficulties are one of the key problems to affect those who have experienced complex trauma, and Dorahy (2010) has reported that both shame and dissociation are strongly related to interpersonal disconnectedness (in a sample of chronic PTSD sufferers). This is particularly relevant in light of findings, from a review of psychotherapy interventions, that there were very low treatment effects of therapy on interpersonal outcomes in CSA populations (Taylor & Harvey, 2010). Identifying factors which are associated with reduced shame and dissociation may have additional value in reducing other related problems (such as interpersonal difficulties). In this respect, dissociation and self-blame/shame along with other variables may be considered risk factors as well as outcomes. For example abuse characteristics have been shown to directly predict self-blame attributions, which in turn predicted additional negative outcomes (Barker-Collo & Read, 2003).

Where one is experiencing high levels of dissociation, by definition one is not going to have the ability to be in contact with the negative experiences associated with the trauma, which is considered necessary to fully forgive others or provide self-compassion to oneself. Self-blame may operate to prevent one fully acknowledging the need for forgiveness, or for offering kindness and understanding to oneself. Where these coping strategies have continued into adulthood they may therefore influence the endorsement of, and beneficial effects associated with, self-compassion and forgiveness in a CSA population.

Study Rationale

The literature on both forgiveness and self-compassion emphasises the importance of being willing and able to be in contact with, and fully experience, negative thoughts and feelings. In support of the basic premise of the relevance of these constructs with a trauma population Mundorf and Paivio (2011) state that the evidence suggests that recovery from trauma requires emotional engagement with the trauma memory. Furthermore in a qualitative exploration of coping in adult survivors of CSA, Chouliara, Karatzias and Gullone (2013) identify the shifting of shame through reattribution of blame (to the perpetrator), and the development of a self-compassionate attitude, as being key to recovery.

Adult survivors of CSA are at high risk for developing symptoms of PTSD, dissociation and self-blame, the latter two being viewed both as negative outcomes in their own right, and as risk factors for other difficulties (including PTSD). All three of these outcomes are understood to develop and be maintained, at least in part, by avoidance of aversive experiences (either internal or external). Higher levels of self-compassion and forgiveness are both associated with

decreased distress and improved well-being in other populations but there is currently limited research looking at these constructs with this group.

Based upon the theoretical models of these constructs, it is proposed that higher levels of self-compassion and forgiveness may offer a protective or rehabilitative function for people who have experienced CSA. Specifically, self-compassion/forgiveness may reduce the need for avoidant coping strategies, such as dissociation and self-blame, thus reducing the likelihood and/or severity of PTSD as well as potentially improving outcomes in the other key areas affected by complex trauma (self-concept, affect regulation and interpersonal relationships).

The main aim of this study is to investigate levels of self-reported forgiveness and self-compassion within a clinical sample of adult survivors of childhood sexual abuse, and to explore the relationships between these and the trauma associated variables of posttraumatic stress symptoms, dissociation and self-blame. In order to investigate these aims the following hypotheses were generated: Hypothesis 1, In keeping with previous research, posttraumatic stress symptoms will positively correlate with dissociation and self-blame; Hypothesis 2, posttraumatic stress symptoms, dissociation and self-blame will correlate negatively with offense-specific, interpersonal forgiveness and Hypothesis 3, posttraumatic stress symptoms, dissociation and self-blame will correlate negatively with the self-compassion.

Methods

Participants

Participants were recruited if they were aged 18-66 years, were fluent in English, were currently in receipt of NHS adult mental health (AMH) services and when they had disclosed an experience meeting the criteria to be classified as CSA (for the purposes of the study this was defined as any form of unwanted sexual contact before the age of 16 years). Potential participants were excluded if they had: a diagnosis of a learning disability or neuro-degenerative condition; traumatic brain injury; were currently experiencing acute psychotic symptoms or were under the influence of non-prescription drugs or alcohol when attending.

A total of 19 participants took part in the study, which was a 12% response rate. Participants were aged between 34-66 years, and 84.2% were female (N=16). The Participant Demographic Characteristics (Table 1, below) indicates varied socio-economic and marital status. Of the sample, 42% of participants indicated that they were currently in receipt of more than one mental health (MH) service, and the majority reported they had received MH services in the past, prior to that which they were currently receiving. A quarter (26%) of participants reported more than one reason for their referral into MH services, and 32% indicated that the primary reason for their referral was depression.

Table 1 – Participant Demographic Characteristics

<u>Characteristic</u>	<u>N</u>	<u>%</u>
<u>Gender:</u>		
Male	3	15.8
Female	16	84.2
<u>Occupation:</u>		
Professional	6	31.6
Skilled	5	26.3
Unskilled	2	10.5
Retired	2	10.5
Unemployed	1	5.3
Housewife	2	10.5
Missing	1	5.3
<u>Marital Status:</u>		
Single	2	10.5
Divorced	5	26.3
Married	10	52.6
Widowed	2	10.5
<u>Nationality:</u>		
Scottish	9	47.4
British	9	47.4
Other	1	5.3
<u>Ethnicity:</u>		
White	19	100
<u>Current MH Services:</u>		
Psychology	7	36.8
Psychiatry	1	5.3
Multiple	8	42.1
Missing	3	15.8
<u>Previous MH Services:</u>		
Psychology	4	21.1
Psychiatry	6	31.6
Multiple	7	36.8
Missing	2	10.5
<u>Reason for Referral:</u>		
Depression	6	31.6
Anxiety	1	5.3
Anger	1	5.3
Suicidal	2	10.5
Multiple	5	26.3
Not Known	2	10.5
Missing	2	10.5

Design and Procedure

The study was a cross-sectional, questionnaire design. A total of 5 NHS boards in Scotland were approached and agreed to support the study, as well as 2 charitable organisations (who provide face-to-face support for survivors), covering both urban and rural locations across Scotland.

In all NHS areas the local contact was a clinical psychologist working in adult mental health services. Within the charitable organisations this was the service manager. The ‘Research Summary’ (Appendix III) was distributed via email, by the local area contact, to all clinicians/staff working within those services whom they believed may have potential participants on their caseload. The summary requested that clinicians/staff contact the researcher indicating how many Research Information Packs they may be able to distribute. The researcher sent out the requested number of packs and clinicians/staff then passed on the information packs to their patients whom they felt might be appropriate potential participants. A total of 156 packs were sent out. All requests for information packs came from clinical or counselling psychologists. No packs were distributed via the charitable organisations.

The pack included a Cover Letter (signed off by the Head of Service or local area contact), a Participant Information Sheet, an Expression of Interest form and a stamped addressed envelope (Appendices IV-VI). Any patients wishing to take part were instructed to make contact with the researcher directly by telephone, email or through returning the Expression of Interest form. The researcher then contacted the potential participants by telephone to answer any questions and arrange a mutually convenient time to meet with the researcher for a one off session to complete all measures.

Measures

Information was collected regarding socio-demographic variables, mental health services received and variables relating to the individual's experience of abuse in childhood (Appendices VII and VIII). Participants were instructed to complete standardized measures specifically in relation to their experience of CSA.

The Impact of Events Scale – Revised (IES-R):

The IES-R (Weiss & Marmar, 1997) is a 22 item, self report measure designed to assess for symptoms of posttraumatic stress. Respondents indicate on a 5-point Likert scale how often, over the past seven days, they have experienced a given symptom. The measure provides a total score as well as scores for the subscales of Avoidance, Intrusions and Hyperarousal (subscale scores are given as a mean of those items), and the total score can range from 0 – 88. This measure has been widely used in trauma research and correlates with DSM-IV (American Psychiatric Association, 1994) criteria for PTSD (Creamer, Bell & Fallia, 2003) and has been shown to have high internal consistency and test-retest reliability (Weiss & Marmar, 1997). Creamer, Bell and Fallia (2003) report good reliability and construct validity in clinical and non-clinical populations, with a Cronbach Alpha coefficient of 0.96 for the IES-R total and similarly high internal consistency for the three subscales (intrusion: 0.94; avoidance: 0.87; hyperarousal: 0.91). The clinical cut-off on the IES-R for PTSD has been given as a total score of 33 (Creamer, Bell & Fallia, 2003). In this study the Cronbach Alpha coefficient for the total was 0.92, intrusions 0.89, avoidance 0.77 and hyperarousal 0.84.

The Dissociative Experiences Scale - II (DES-II):

The DES-II (Carlson & Putnam, 1993) is a 28 item, self-report questionnaire aimed at capturing dissociative symptoms, on which participants rate what percentage of the time in their daily lives they have certain experiences. Total score can range 0 - 100. A score on the DES-II of over 20 is considered to be clinically relevant (Carlson & Putnam, 1993). The DES has been used in a large number of studies, has been demonstrated to have excellent convergent and discriminant validity and high internal consistency (Alpha coefficient = 0.93) (van Ijzendoorn & Schuengel, 1996). Reliability and validity of the scale have also been well demonstrated (Carlson & Putnam, 1993). In this study the Cronbach Alpha coefficient was 0.94.

The Cognitive Distortions Scale (CDS):

The CDS (Briere, 2000) is a 40 item, self report measure consisting of 5 subscales: Self-Criticism; Self-Blame; Helplessness; Hopelessness and Preoccupation with Danger. Participants indicate on a 5-point scale (from Never to Very Often) how often they have had the thoughts/feelings described over the past month. Scores for each scale are summed separately and the total score for the Self-Blame subscale can range from 8 - 40. The scale has evidence of discriminant, convergent and construct validity in clinical and non-clinical samples, and for the Self-Blame subscale the Cronbach Alpha coefficient is reported as 0.92 (Briere, 2000). In this study the Cronbach Alpha coefficient for the Self-Blame subscale was 0.91.

The Enright Forgiveness Inventory (EFI):

The EFI (Subkoviak et al., 1995) is a 65 item, self-report measure, which aims to assess affective, behavioural and cognitive correlates of offense specific, interpersonal transgressions. It also contains 5 items which assess for 'pseudo-forgiveness' and a final single item measure.

Total score can range from 60 - 360. As it does not use the term 'forgiveness' it avoids issues of lay person versus researchers definitions (Orcutt, Pickett & Pope, 2008). Participants were not required to complete the first page, which asks them to bring to mind and describe a transgression as they were being requested to complete it specifically in relation to their experience of CSA. The EFI has been shown to have evidence for the reliability and construct validity of the scale has been presented (Enright & Rique, 2000). The Cronbach Alpha coefficient for the total score has been reported as 0.98 (with subscale alphas ranging from 0.93 to 0.97) and correlations between the subscales of 0.80 – 0.87 (Subkoviak et al, 1995). In this study the Cronbach's Alpha coefficient for the total score was 0.95 and for the subscales cognitive 0.96, affective 0.95 and behavioural 0.94.

The Self-Compassion Scale (SCS):

The SCS (Neff, 2003b) is a 26 item self report measure. Participants are required to rate from 1 (Almost Never) to 5 (Almost Always) the extent to which they agree that each item is true for them. The scale consists of six subscales, which are made up of three opposing pairs: self-kindness/self-judgement; common humanity/isolation and mindfulness/over-identification. The total is calculated by summing the subscale means. The measure has been shown to have good construct validity, a Cronbach Alpha coefficient for the total SCS score of 0.92 and reported subscale alphas are: self-kindness 0.78; self-judgement 0.77; common humanity 0.80; isolation 0.79; mindfulness 0.75 and over-identification 0.81 (Neff, 2003b). In this study the Cronbach Alpha coefficient for the total was 0.86, and for individual subscales were self-kindness 0.85, self-judgement 0.88, common humanity 0.79, isolation 0.52, mindfulness 0.74 and over-identification 0.70.

Ethical Issues and Approval

Given that the study was aiming to sample a clinical population, a number of ethical issues were considered and addressed. Consent forms were completed by all participants (Appendix IX).

Participant Distress

The method of recruitment aimed to minimise this as anyone recruited into the study would have already disclosed their experience of CSA to their clinician, who would have considered their appropriateness for the study prior to providing them with information about it. The researcher also confirmed with all potential participants that they had read and understood the information sheet. The study was designed to provide the necessary information to answer the research question, whilst aiming to keep participant load to a minimum. The researcher regularly checked-in with participants about how they were feeling and whether they needed to take a break. During data collection additional time was allowed should participants become distressed or wish to discuss any issues arising from their participation in the study.

Informed Consent

As information was provided by the patient's clinician, and the individual then had to actively contact the researcher in order to take part, it is expected that this will have reduced the likelihood of potential participants feeling pressured or obligated to take part. Potential participants had the opportunity to ask questions or raise concerns during initial telephone contact, prior to signing the consent form and throughout the data collection process. The consent form was explained verbally before participants were requested to read and sign it if they were in agreement.

Confidentiality

Given the sensitive nature of the research topic, confidentiality was paramount. On the Expression of Interest form participants were able to indicate what times it was appropriate for the researcher to contact them, and whether it was okay for the researcher to leave a message on a voicemail service or with another person who answered the phone. Consent forms and contact details were kept separate from the research data, which was anonymous. All data was stored securely, in a padlocked case when being transported and in a locked filing cabinet when stored at the main site.

Ethical approval for this research project was provided by the North of Scotland NHS REC (Appendices IX and X).

Sample Size and Statistical Analysis

Planned statistical analyses were of the correlations between variables. Three empirical studies carried out with survivors of childhood abuse including CSA, and looking at similar constructs, were used to establish the sample size required. In the first study, Snyder and Heinze (2005) found a significant correlation between forgiveness and PTSD (-0.67 ; $p < .001$). The second study by Vettese, Dyer, Li and Werkle (2011), demonstrated a significant correlation of -0.56 ($p < .001$) between self-compassion and psychological distress. Finally, Wilson and Scarpa (2012) provided a correlation for dissociative experiences and posttraumatic stress symptoms as being 0.78 ($p < .01$). Cohen (1992) states that for a product moment correlation any score of 0.5 or greater demonstrates a large effect size. Correlations between the relevant variables carried out in these studies all had large effect sizes of 0.5 or greater. Power analysis for a one-tailed correlation was carried out using G*Power software (Faul, Erdfelder, Lange & Buchaner, 2007),

which indicated that a sample size of 13 is sufficient to detect an effect with 80% power and an alpha value (error probability rate) of .05. Previous studies have shown a trend for clinical samples of CSA survivors to demonstrate higher effect sizes across a range of variables (Hillberg, Hamilton-Giachritsis & Dixon, 2011).

All data was stored anonymously within an SPSS version 19 (SPSS Inc.Chicago, IL) spreadsheet. SPSS was the software used for all statistical data analyses.

Results

Sample Characteristics

Participants Experience of Abuse results are reported in Table 2, below (full results in Appendix XI). The information presented shows a wide range of CSA experiences with regard to relationship to perpetrator, age when abuse began, frequency of abuse and duration. All those who took part indicated that the abuse involved physical contact with another person, 42% indicated that the abuse also involved witnessing sexual acts, and 10% stated that other forms of CSA took place. Of the sample, 58% (N=11) reported that the abuse was painful or violent, and 52% stated that the abuse was carried out over 5 years or more. A high proportion of participants also reported having been subject to physical abuse (47%), emotional abuse (73%) and neglect (32%). Only four individuals did not endorse experiencing another form of child abuse in addition to CSA.

Exploratory Data Analysis

Prior to statistical analysis the data were explored to assess for assumptions of normality in order to ascertain whether parametric or non-parametric testing was indicated for this data set. Total scores for all measures were examined visually using histograms and Q-Q plots (Appendix XII) to assess for skew, kurtosis and outliers. Skew and kurtosis scores were also transformed into z scores to test for statistical significance. All scores were non-significant at $p < .05$ level, with the exception of the skewedness of EFI total score. Data inspection showed one score on the EFI to be nearly three standard deviations above the mean. Due to the fact that there was only one outlying score, the potential impact of transformation on further analyses and interpretation and the lack of further data explaining the anomalous score, the decision was taken to remove this

Table 2 – Experience of Abuse Characteristics

Characteristic	N (Total = 19)	%
<u>Age Abuse Began</u>	Range: 2-13 years, Mean: 6.58 (SD 3.746)	
<u>Perpetrator:</u>		
Immediate Family	6	31.1
Other family/friend	7	36.8
Stranger	1	5.3
Multiple	5	26.3
<u>Duration:</u>		
0-5 years	9	47.36
>5 years	10	52.64
<u>Frequency:</u>		
1-10	4	21.1
>10	12	63.2
Don't Know/Missing	3	15.8
<u>Painful:</u>		
Yes	11	57.9
No	7	36.8
Don't Know	1	5.3
<u>Physical Contact:</u>		
Yes	19	100
No	0	0
<u>Witnessing:</u>		
Yes	8	42.1
No	9	47.4
Missing	2	10.5
<u>Other:</u>		
Yes	2	10.5
No	17	89.5
<u>Physical Abuse:</u>		
Yes	9	47.4
No	10	52.6
<u>Emotional Abuse:</u>		
Yes	14	73.7
No	5	26.3
<u>Neglect:</u>		
Yes	6	31.6
No	13	68.4
Total endorsing CSA plus other form of abuse	15	78.94

variable from the data. When data were re-examined with the outlier removed, both skew and kurtosis were non-significant at $p < .05$ (amended Q-Q plot in Appendix XII). All further analyses were conducted using EFI data with this outlier removed. Normality was also assessed using the Kolmogorov-Smirnov (KS) test, which was non-significant for all total scores of measures (Appendix XIV). A non-significant result indicates normality (where significance = $p < .05$). Both visual analysis and statistical testing indicated that the data for each measure met the assumption of normal distribution, thus indicating parametric testing would be appropriate.

Descriptive Statistics and Clinical Cut-offs

Number of participants scoring above clinical cut-offs on the IES-R and DES-II are provided in Table 3 and frequency distributions of total and subscale scores are provided in Table 4. Substantial heterogeneity is demonstrated across all measures, as indicated by the large standard deviations and ranges. In this sample the majority of participants met the clinical cut-off for PTSD (68%), over half scored above the cut-off for clinically relevant dissociative symptoms (58%) and within this sample 42% scored above clinical cut-offs for both posttraumatic stress symptoms and dissociative symptoms. In relation to the EFI pseudo-forgiveness scale, Subkoviak et al. (1995) state that a pseudo-forgiveness score of 20 or higher suggest a ‘masking’ of true feelings. None of the participants in this study scored 20 or above on this scale.

Table 3 - IES-R and DES-II clinical cut-offs

<u>Measure</u>	<u>N (%) > clinical cut-off</u>
IES-R*	13 (68.42)
DES-II**	11 (57.89)
Combined	8 (42.1)

*clinical cut-off = 33; **clinical cut-off = 20

Table 4 – Descriptive Statistics for Measures

<u>Measure and subscales</u>	<u>Mean</u>	<u>Standard Deviation</u>	<u>Range</u>
IES-R Total	42.1	18.8	5 – 71
- Avoidance	1.6	0.9	0 – 3.3
- Intrusions	2.1	1.0	0 – 3.8
- Hyperarousal	1.9	1.0	0.5 - 3.8
DES-II	25.9	16.7	2.8 – 65.8
CDS Self Blame	26.3	8.3	9 - 38
EFI Total	129.3	53.4	60 – 233
- Affective	37.3	17.4	20 – 79
- Behavioural	51.3	22.3	20 – 90
- Cognitive	40.6	18.9	20 - 76
SCS Total	14.7	3.8	9.5 – 21.3
- Self-kindness	2.5	1.0	1 – 4.6
- Self-judgement	2.2	0.9	1 – 4.2
- Humanity	2.7	0.9	1 – 4
- Isolation	2.3	0.7	1 – 3.7
- Mindfulness	2.8	0.9	1.5 – 4.5
- Overidentification	2.0	0.8	0.5 – 3.5

Analysis of Relationships Between Variables

The assumptions of normality were met in relation to all five variables of interest, and therefore Pearsons Correlations were carried out between each of the measures total scores. Due to the fact that correlations were planned, visual inspection of the relationships between variables was carried out using scatterplots in order to investigate levels of homoscedacity and linearity. These

were evident between the IES-R and DES-II, and the IES-R and CDS, but less apparent in the relationships between other measures. No curvilinear relationships were evident.

A significant, positive correlation was found between posttraumatic stress symptoms and dissociative symptoms ($r = 0.621$, $p < .01$) and between posttraumatic stress symptoms and levels of self-blame cognitions ($r = 0.394$, $p < .05$). Significant correlations were not demonstrated between forgiveness and posttraumatic stress symptoms ($r = .032$, *ns*) or self-blame ($r = .189$, *ns*). A significant, positive correlation was found between forgiveness and dissociation ($r = .462$, $p < .05$), which was in the opposite direction to that hypothesised. No significant results were obtained between self-compassion and posttraumatic stress symptoms ($r = -.315$, *ns*), dissociation ($r = -.359$, *ns*) and self-blame ($r = -.34$, *ns*). Results are presented in Table 5. Due to multiple analyses being conducted Bonferroni Correction was calculated ($p < .005$). Applying this more stringent level for significance renders all results non-significant.

Table 5 – Correlation Coefficients Between Total Scores of Measures

<u>Measure</u>	<u>IES-R</u>	<u>DES-II</u>	<u>CDS</u>	<u>EFI</u>	<u>SCS</u>
<u>IES-R</u>	1.000	-	-	-	-
<u>DES-II</u>	0.621**	1.000	-	-	-
<u>CDS</u>	0.394*	0.212	1.000	-	-
<u>EFI</u>	0.032	0.462*	0.189	1.000	-
<u>SCS</u>	- 0.315	- 0.359	- 0.340	- 0.097	1.000

*correlation is significant at 0.05 level (1 tailed)

**correlation is significant at 0.01 level (1 tailed)

Discussion

Main Findings

The purpose of this study was to explore levels of self-reported self-compassion and forgiveness, and to investigate the relationship between these and the outcomes of posttraumatic stress symptoms, dissociation and self-blame, within a clinical sample of adults who had experienced sexual abuse in childhood. In keeping with previous research the sample in this study endorsed high levels of posttraumatic stress symptoms, dissociative symptoms and self-blame cognitions and, as hypothesised, PTSD symptoms were significantly and positively correlated with dissociation and self-blame. Forgiveness was found to significantly, positively correlate with dissociation, however contrary to previous findings the relationships between self-compassion/forgiveness and the other variables of interest did not reach significant levels.

The first hypothesis to be tested was that posttraumatic stress symptoms would positively correlate with dissociation and self-blame. As predicted, the IES-R was significantly, positively correlated with the DES-II and CDS (self-blame subscale). The relationship between posttraumatic stress and dissociation/negative thinking styles has been well established in previous research (e.g. Brand & Stadnik, 2013; Filipas & Ullman, 2006), and the medium to large effect sizes found here are in keeping with this. Scores on these measures suggest that this was a sample experiencing high levels of distress and cognitive bias. In this sample 74% met the clinical cut-off for PTSD and 58% for clinically relevant dissociative symptoms. Briere (2000) reports $M = 11.1$ ($SD = 4.8$) on the Self-Blame subscale with a non-clinical sample exposed to interpersonal trauma, however within this sample the score was considerably higher ($M = 26.3$).

As outlined earlier, within the wider trauma literature dissociation and self-blame are understood to be coping strategies adopted by a child, particularly when exposed to chronic and severe abuse. The theory suggests that dissociative symptoms and self-blame cognitions, although initially serving a protective function, may result in reduced processing of the traumatic experiences thus leading to higher levels of posttraumatic stress. Although this understanding of the relationship between these variables makes conceptual sense it should be acknowledged that an alternative understanding may be that individuals experiencing increased trauma symptoms (such as intrusive thoughts) may be at greater risk for higher levels of dissociation and distorted cognitions as they struggle to cope with the primary difficulty. As with much of the research in this area it is not possible to ascertain directional relationships within this cross-sectional study. To the authors knowledge this is the first time that the relationship between self-blame and dissociation has been assessed. The absence of a significant correlation, and the small effect size, may suggest that different risk factors contribute to their development.

The second hypothesis to be tested was that forgiveness would correlate negatively with posttraumatic stress, dissociation and self-blame. Within this study the hypothesis was not supported, as all relationships were positive in direction and of these the only one to reach significance was between forgiveness and dissociation. As outlined in the introduction, previous literature exploring the relationship between trauma symptoms and forgiveness, in a sample of CSA survivors, has been inconsistent (Orcutt, Pickett & Pope, 2008; Snyder & Heinze, 2005). To the author's knowledge no other study to date has explored the relationship between forgiveness and dissociation or self-blame with this population. The findings presented here raise questions about how forgiveness may operate within this population. For example, given the robust relationship between posttraumatic stress and dissociation and the moderate

relationship demonstrated between dissociation and forgiveness, a similar relationship might be expected between forgiveness and posttraumatic stress, however this was not the case. Indeed the notably small effect sizes found between forgiveness and trauma symptoms/self-blame in this study would suggest that these constructs may not be related in this population.

One issue which may have impacted upon the results is suitability of the measure used in assessing levels of forgiveness with this population. The EFI was the only measure in this study which suffered from floor effects, with a number of participants scoring a total of 60 (the lowest possible score). The mean total score for this sample ($M = 129.3$) was considerably lower than that found with a normative sample ($M = 261$) (Enright & Rique, 2004), and also lower than for a sample of women who had experienced spousal domestic abuse ($M = 155.40$; $SD = 38.24$) (Reed & Enright, 2006). Although the forgiveness literature makes clear distinctions between forgiveness and the concept of reconciliation, several of the behavioural items refer to having contact with the offender. Behavioural items on the measure include statements such as “I do/would show friendship”, “I do/would establish good relations with him/her” and “I do/would attend his/her party”. Endorsement of these statements by individuals in this sample may not be in their best interests, and it is plausible that although this measure has previously been used with survivors of CSA (e.g. Orcutt, Pickett & Pope, 2008) its utility with this population is limited.

The third hypothesis was that posttraumatic stress symptoms, dissociation and self-blame would correlate negatively with self compassion. Although non-significant, the relationship between self-compassion and the three trauma related variables was in the expected direction and a moderate effect size was found between self-compassion and all three variables. Neff (2003a) reported $M = 18.25$ for the total mean SCS score in a normative sample and within this study mean total self-compassion was somewhat lower ($M = 14.7$). The endorsement of self-

compassionate responses, and the moderate relationship with lower levels of trauma related outcomes, within this clinical sample of CSA survivors is encouraging in respect of offering some preliminary support for the utility of the construct with this population.

It is worth considering whether the constructs of self-blame and self-compassion are sufficiently similar as to be considered opposites of one another. However if this were the case one might expect a larger effect size (indicating multicollinearity) than that found in this study. If, as proposed here, self-blame develops as a coping mechanism in response to abuse and self-compassion is a trait which develops later to aid recovery, then they can be considered as distinct but related concepts. It is possible for instance, for one to have an affective response of shame to a stimulus, which is accompanied by automatic self-blame cognitions, but to be mindfully aware of this response and relate to that experience with compassion (Gilbert, 2010). Therefore the natural development, or conscious cultivation, of self-compassion in CSA survivors may promote resilience in tolerating and overcoming the legacy of abuse.

Strengths and Limitations of this Research

As far as the author is aware this is the first study of its kind to investigate the relationships between these variables in a clinical sample of CSA survivors. There has been little exploration of the constructs of forgiveness and self-compassion with this population, and it appears that many of the research studies with survivors utilised community or student samples. Both self-compassion and forgiveness are relatively new constructs in the field of psychological research and more research is required to determine their clinical utility. This paper offers a preliminary step in developing this knowledge base and therefore a particular strength of this research was the use of a clinical sample. Participants were recruited from mental health services across

Scotland, and the sample characteristics outlined above show that there was a range of socio-demographics, presenting problems and types of abuse experience.

The results of the study should however be considered in light of its limitations. Firstly, the small sample size ($N = 19$) means that the study is underpowered to detect significant correlations with anything other than moderate to large effect sizes. It appears that a number of relationships detected were sub-threshold for significance due to this issue, and the analyses which can be carried out and the conclusions which can be drawn are limited as a result of this. It is important to note that due to the low power of the study results are discussed in relation to significance values of $p < .05$. When more conservative p-values results are applied the results are no longer significant. A related issue with regard to sample size is the low response rate, which would suggest that a high number of potential participants chose not to take part in the study. With this type of study design it was not possible to compare responders with non-responders, however it is feasible that there may be important and significant differences which could have implications for generalisability.

It was out with the scope of this study to look at other types of trauma symptoms, beyond those assessed here. Clearly from the description outlined in the introduction, the difficulties experienced by this population are far reaching and there may be other factors affecting the pattern of responding observed. For example, family functioning and the presence of a secure attachment figure during childhood, others response to disclosure, level of social support, current attachment style and revictimization have all been demonstrated to influence outcomes in this population (Banyard, Williams & Siegel, 2001; Barker-Collo & Read, 2003; Murthi & Espelage, 2005; Yancey & Hansen, 2010; Walker, Holman & Busby, 2009; Whiffen & MacIntosh, 2005). Similarly, in order to minimise participant load there were other potentially relevant factors not

assessed for, such as current relationship with the perpetrator(s) or additional traumatic experiences.

Finally, as with much of the research in this area, this study does not allow for causal, directional relationships to be determined. For example, do lower levels of posttraumatic stress symptoms reduce the need for maladaptive coping thus allowing the development of increased levels of self-compassion or does the development and cultivation of these traits reduce avoidance, distress and mental health difficulties? Do increased levels of dissociative traits mean that endorsement of forgiveness does not carry the same benefits as for other populations, or does a belief in the “need” to forgive mean individuals avoid full acknowledgement of the hurt caused via dissociative mechanisms?

Future Research and Clinical Implications

There are a number of issues which it would be of benefit for future researchers to address, and which may have implications for clinical practice. Primarily, the replication of this study with an increased sample size would provide sufficient power to allow more definite conclusions to be drawn regarding the nature of the relationship between these variables within this population. In particular, clarity regarding the potential for higher levels of self-compassion to be significantly associated with less severe trauma outcomes could indicate value in developing the use of compassion-based interventions with survivors of CSA. A second area which may be fruitful in regard to developing interventions for this population is that of individuals expressing self-compassionate or forgiving attitudes whilst simultaneously experiencing high levels of cognitive distortions (including self-blame). This may be particularly relevant for clinicians utilising cognitive therapy techniques, as the ability to generate cognitive challenges may not result in the

improved outcomes which might otherwise be expected. The endorsement of self-compassion/forgiveness statements may reflect beliefs or values acquired at a later developmental stage, which although consciously endorsed are unable to successfully challenge and replace the previously acquired negative core beliefs.

The positive correlation of forgiveness with negative outcomes (particularly dissociation) suggests further research is required in understanding the relationship between these variables within this population. The validity of the EFI and other forgiveness measures with survivors of CSA warrants further investigation. The current research suggests that endorsement of even relatively low levels of forgiveness in this population may need to be treated with a degree of caution. This is not to suggest that genuine forgiveness cannot be expressed by individuals who have experienced CSA, but rather that both researchers and clinicians need to be mindful of the possibility that it may not always be associated with the positive outcomes found in other studies.

Finally it would also be of benefit to investigate other types of trauma outcome (such as depression, emotion dysregulation and interpersonal difficulties) in addition to those presented here. As survivors of CSA are at increased risk of re-victimization, future research would benefit from taking account of individual's trauma history beyond that related to childhood. More studies utilising longitudinal or pre- and post- designs, and looking at the effects of different forms of therapy on these constructs would provide meaningful contributions to the current evidence-base for the treatment of difficulties associated with CSA.

Conclusions

This study investigated outcomes in a clinical sample of adult survivors of childhood sexual abuse. In keeping with previous research, this study found posttraumatic stress symptoms to be

significantly, positively correlated with both dissociative symptoms and self-blame cognitions. A significant, positive relationship was demonstrated between forgiveness and dissociation, and moderate (though non-significant) negative relationships between self-compassion and trauma symptoms, dissociation and self-blame. The positive direction of the correlations between forgiveness and trauma outcomes are in the opposite direction to that hypothesised, and contrary to most previous research. The small sample size limits the conclusions which can be drawn, and the study was underpowered to usefully explore the impact of abuse or participant characteristics upon the results. It would be of value to explore the relationships between these variables further with a larger sample and comparable sample characteristics before firm conclusions can be drawn.

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Chapter 5 - Extended Results and Discussion

This chapter contains additional exploration of the empirical research data, with further post-hoc analyses and discussion which are not provided within the research journal article.

Original Research Aims

The original aim of the research project was to explore the mediational effects of dissociation and self-blame on the relationship between trauma symptoms and forgiveness and self-compassion reported by survivors of CSA and to investigate the influence of potential moderating variables on these relationships. The low response rate means that the study was underpowered to conduct this type of analysis and thus the research aims presented within the journal article above were modified in order to conserve power in statistical analyses. Whilst acknowledging the limitations of the sample size on the likelihood of detecting significant results, further analyses of the data collected are presented here.

Sub-Scale Analysis

To the author's knowledge, there is currently little in the way of research to date investigating whether there are systematic differences in the way self-compassion and forgiveness operate in relation to the three sub-groups of which the PTSD construct is understood to comprise (hyperarousal, intrusions and avoidance). The only study that this author is aware of is that by Thompson and Waltz (2008), who reported that only the avoidance subscale was significantly, negatively correlated with self-compassion in a sample of students. The literature on PTSD suggests that the use of avoidance as a coping strategy may maintain posttraumatic stress (Foa & Kozak, 1986). Furthermore experiential avoidance has also been suggested as a mediator underpinning the wide range of negative outcomes associated with CSA (Batten, Follette &

Aban, 2001; Briere, Hodges & Godbout, 2010). As the models of both self-compassion and forgiveness emphasise a willingness to be in touch with negative experiences, it is therefore proposed that of the three PTSD subscales, avoidance should be more highly, negatively correlated with these constructs.

The three IES-R subscales (avoidance, intrusions and hyperarousal) were assessed for assumptions of normality as described previously. There were no outliers, and tests of skew, kurtosis and Kolmogorov-Smirnov were non-significant, indicating that the assumption of normality was met. The aim was to explore the relationship between the IES-R subscales and total scores on the EFI and SCS. Scatterplots between all variables of interest were inspected and did not demonstrate curvilinear relationships. Pearsons correlations were therefore carried out between the variables. Self-compassion was significantly, negatively correlated with hyperarousal ($r = -.405$; $p < .05$) but not with avoidance ($r = -.273$, *ns*) or intrusions ($r = -.146$, *ns*). Forgiveness was not significantly correlated with avoidance ($r = -.006$, *ns*), intrusions ($r = .011$, *ns*) or hyperarousal ($r = .102$, *ns*). As multiple analyses were conducted, the Bonferroni Correction was calculated ($p < .008$), at which level none of the results are significant.

Table 1 – IES-R Subscale Correlations

<u>Measure</u>	<u>EFI</u>	<u>SCS</u>
<u>Avoidance (IES-R)</u>	-.006	-.273
<u>Intrusions (IES-R)</u>	.011	-.146
<u>Hyperarousal (IES-R)</u>	.102	-.405*

*correlation is significant at 0.05 level (1 tailed)

During early exploration of the data, it was noted that the descriptive statistics for the EFI showed a higher mean and range for the Behavioural items than the Affective or Cognitive items. Given the exploratory nature of this study, and the limited information about how these constructs operate within this population, paired-samples t-tests were conducted to explore whether this difference was significant. The Behavioural subscale ($M = 51.39$) was significantly higher than both the Affective subscale ($M = 37.33$), $t(17) = 3.55$, $p < .001$ (one-tailed), and the Cognitive subscale ($M = 40.61$), $t(17) = 3.69$, $p < .001$ (one-tailed). Effect sizes (Cohen's d) are large: 0.836 and 0.869 respectively. With Bonferroni Correction applied ($p < .02$) these differences remain significant.

Analysis of Abuse Characteristics

Based upon the evidence from the reviews outlined earlier (Hillberg, Hamilton-Giachristis & Dixon, 2011; Maniglio, 2009), the impact of CSA is likely to be specific for each individual, dependent upon a wide range of variables. Given the large number of potential variables which could be considered risk factors, as well as variation across studies in terms of definition, operationalising, sample source and measures used there remains little in the way of robust, conclusive evidence for the most salient risk factors. The issue is further complicated by the fact that many of these moderating and mediating variables may act on one another to further affect outcomes. Given the inconsistent findings in relation to the effects of study and abuse characteristics, it is incumbent upon on researchers to continue to investigate these variables.

It was intended that the correlations between duration and frequency of abuse, and outcome measures, would be explored. However due to many participants inability to provide specific data in relation to these characteristics this was not possible. Data provided were classified in

the data set as nominal data, and the subsequent categories generated did not allow for between group exploration of these variables due to the small sample size.

Correlational analysis between outcome scores and age at the time when sexual abuse began was conducted. Skew and kurtosis scores were inspected for statistical significance, and scores were non-significant at $p < .05$ level. Normality was also assessed using the Kolmogorov-Smirnov (KS) test, which was non-significant ($p = .071$). Data were also examined visually using histograms and Q-Q plots to assess for skew, kurtosis and outliers. Despite the non-significance of the statistical analysis, visual inspection demonstrated that the assumption of normality was not met in this data set. As data were found not to be normally distributed non-parametric testing was indicated. Investigation of scatterplots also indicated the possibility of curvilinear relationships between this variable and measure scores, therefore Spearman's rank order coefficient was used to investigate the relationship between age when abuse began and total scores on all measures. None of the correlations between total scores and age when abuse began met significance at $p < .05$ (IES-R $r = -.177$; DES-II $r = -.068$; CDS $r = -.347$; EFI $r = -.229$; SCS $r = -.141$).

An independent-samples t-test was conducted to compare total scores on outcome measures across three abuse characteristics: those who stated that their experience of CSA was painful/violent and those for whom it was not; those who had endorsed physical contact as the only form of abuse and those who also endorsed witnessing sexual acts, and those who indicated they had experienced physical abuse in addition to CSA and those who had not (Table 2). Levene's test was non-significant for all analyses, indicating the assumption of equality of variance was met.

The SCS total score was the only measure to demonstrate a significant difference between those who endorsed their abuse as painful ($M = 13.54$, $SD = 3.79$) and those who did not ($M = 17.4$, $SD = 2.46$) ($t(16) = -2.38$, $p = .03$, two-tailed). No significant differences were found for any of the measures, either in relation to type of abuse experienced, nor in respect of those who had also experienced physical abuse. As multiple analyses were conducted, Bonferroni corrections were calculated ($p < .006$). At this level of significance none of the analyses were significant.

Table 2 – Independent Samples t-tests

<u>Measure:</u>	IES-R	DES-II	CDS	EFI	SCS
<u>Characteristic:</u>					
Painful:					
- Yes N	11	11	11	11	11
- No N	7	7	7	6	7
- t-score (p value)*	.54 (.59)	1.03 (.32)	1.17 (.26)	.37 (.71)	-2.38 (.03)**
- ES (<i>d</i>)	.26	.49	.60	.18	1.2
Witnessing:					
- Yes N	8	8	8	8	8
- No N	9	9	9	8	9
- t-score (p value)*	1.54 (.14)	.56 (.59)	.24 (.81)	.28 (.78)	-1.94 (.07)
- ES (<i>d</i>)	.75	.27	.12	.14	.93
Physical Abuse:					
- Yes N	9	9	9	9	9
- No N	10	10	10	9	9
- t-score (p value)*	1.15 (.26)	-.129 (.89)	.86 (.4)	-1.43 (.17)	-1.16 (.26)
- ES (<i>d</i>)	.53	.05	.39	.67	.53

Abbreviations: SD – Standard Deviation; ES – Effect Size (Cohen's *d*) 0.2 = small, 0.5 = medium, 0.8 = large

*two-tailed

** $p < .05$

Regression Analyses

Hierarchical multiple regression was carried out in order to assess the ability of self-compassion and forgiveness to predict variance in symptoms of PTSD after controlling for the influence of dissociation and self-blame. There is greater empirical evidence for the relationship between PTSD and dissociation/self-blame in this population (Barker-Collo & Read, 2003; Chu & DePrince, 2006) and these are considered to potentially have been coping strategies that developed at the time of the abuse in order to survive, whereas forgiveness and self-compassion are more likely to be recovery-oriented gains that developed at a later stage. In order to conserve power two separate regression analyses were run, one for forgiveness and one for self-compassion.

In the first analysis, dissociation and self-blame were entered at Step 1, explaining 46% of the variance in posttraumatic stress symptoms. Once forgiveness was entered at Step 2 the model explained 56% of the overall variance, $F(3, 14) = 94.776$, $p < 0.01$. Forgiveness explained an additional 10% of the variance in PTSD symptoms, after controlling for dissociation and self-blame, $R^2 \text{ change} = .101$, $F \text{ change}(1, 14) = 3.193$, $p = 0.09$. In the final model, only dissociation was statistically significant ($\beta = .721$, $p < 0.01$). Beta values for the other two variables were self-blame ($\beta = .309$, $p = .113$) and forgiveness ($\beta = -.360$, $p = 0.096$).

P-P plots and scatter plots indicated that assumptions of normality, linearity and homoscedacity were met and there were no outliers influencing the data. In addition, Mahalanobis distances and Cook's distances were calculated and did not exceed critical values (16.27 and < 1 respectively). Durbin-Watson scores indicated independence of residuals and standardised residuals were within normal limits. Correlation coefficients indicated that multicollinearity was not found

amongst the variables within the regression model, and tolerance and VIF scores also fell within acceptable limits.

In the second analysis, dissociation and self-blame were entered at Step 1, explaining 46% of the variance in posttraumatic stress symptoms. Once self-compassion was entered at Step 2 no further predictive value was added, thus the model predicted 46% of overall variance, $F(3, 15) = 4.221$, $p < 0.05$. After controlling for dissociation and self-blame, self-compassion explained no further variance in the model, $R^2 \text{ change} = .000$, $F \text{ change} (1, 15) = .013$, $p = .909$. In the final model only dissociation was statistically significant ($\beta = .55$, $p < .05$). Beta values for the other two variables were self-blame ($\beta = .268$, $p = .207$) and self-compassion ($-.025$, $p = .909$).

P-P plots and scatter plots indicated that assumptions of normality, linearity and homoscedacity were met and there were no outliers influencing the data. In addition, Mahalanobis distances and Cook's distances were calculated and did not exceed critical values (16.27 and < 1 respectively). Durbin-Watson scores indicated independence of residuals and standardised residuals were within normal limits. Correlation coefficients indicated that multicollinearity was not found amongst the variables within the regression model, and tolerance and VIF scores also fell within acceptable limits.

As previously, due to multiple analyses being carried out, Bonferroni correction was applied. At this more stringent probability rate ($p < .008$) none of the analyses reach significance.

Discussion of Extended Results

It was proposed that based upon the theoretical models of forgiveness and self-compassion that the avoidance subscale of the IES-R may correlate more highly with these constructs than intrusions or hyperarousal. Contrary to this expectation however, avoidance was not found to correlate more highly than the other IES-R subscales with either forgiveness or self-compassion. The only significant relationship found here was between self-compassion and hyperarousal (moderate to large effect size). Although a moderate effect was found in the relationship between self-compassion and avoidance, the study was underpowered to detect a significant result of this size. Given the lack of a relationship found between the total scores of forgiveness and posttraumatic stress (described in the previous article) it is perhaps not surprising that there was no significant relationships between forgiveness and the subscales.

As already outlined, the models of self-compassion and forgiveness specify reduced avoidance as one of the key mechanisms within these approaches which can lead to healing and recovery following adversity. The findings reported here, although tentative at best, suggest the possibility that both constructs may have a more complex relationship with PTSD symptoms than has previously been identified. For example there are no clear theoretical reasons for the stronger relationship between self-compassion and hyperarousal, as opposed to avoidance/intrusions. Although this may be an anomalous finding within this sample, it remains to be more clearly elucidated how self-compassion might be related to the reduction of distress and symptomatology following CSA. It is also of interest as to why the relationship demonstrated between forgiveness and PTSD symptoms elsewhere has not been replicated here. A positive relationship was found between forgiveness and dissociation (described in the previous journal article). In view of this, and the conceptual overlap between dissociation and

avoidance, it may have been expected that within this sample there would likewise be a positive relationship between avoidance and forgiveness, however this was not found to be the case. The unexpected pattern of correlations found between forgiveness and the other outcomes requires further investigation.

The issue of the appropriateness of the EFI to this population (discussed within the journal article) becomes even more salient when one notes that there was significantly higher endorsement of behavioural than affective or cognitive items (and this remained significant even when a more conservative estimate of significance was applied). It is worth considering the possibility that the endorsement of forgiveness in this population may serve a similar avoidant coping function as self-blame, and that therefore participants are not endorsing “genuine” forgiveness as described in the literature. Against this argument however, is the fact that none of the participants in this study scored 20 or above on the “pseudo-forgiveness” scale, which is considered to indicate a masking of “true feelings” (Subkoviak et al., 1995).

A further aim was to explore the impact of a number of abuse characteristics upon the outcomes of interest. As with previous analyses, the sample size will have reduced power to detect significant results beyond those found with large effect sizes. Despite this limitation, a number of moderate effect sizes were found which were nearing significance. Although unable to draw conclusions from these findings in isolation, they may usefully point to areas for future investigation. The first characteristic to be analysed was the age at which abuse began. Although the relationship did not reach significance, a moderate effect size was found between age when abuse began and increased self-blame. The relationship was negatively correlated indicating that younger age at time of abuse may be associated with increased self-blame. It is possible that younger age at time of abuse increases the likelihood of revictimisation by multiple

perpetrators thus reinforcing self-blame attributions. This is supported by findings that following CSA, both younger age at time of abuse and revictimization in adulthood predicted self-blame both retrospectively and currently (Filipas & Ullman, 2006).

Group differences were explored between those who had/had not experienced sexual abuse as painful/violent, also witnessed sexual acts and experienced physical abuse in addition to sexual abuse in childhood. Within these analyses the only finding to reach significance (at $p < .05$ level) was that those who experienced CSA as painful/violent reported lower levels of self-compassion than their counterparts. There was also a moderate effect size of this variable on dissociation and self-blame. This may indicate that where CSA is painful/violent this increases the likelihood of dissociative and self-blame coping strategies and subsequently reduces the ability of individuals to provide self-compassion. Similarly, those who had witnessed sexual acts in addition to physical contact reported lower levels of self-compassion and increased posttraumatic stress symptoms, with both of these demonstrating moderate effect sizes. Finally this study found moderate effect sizes for those who had experienced physical abuse in addition to CSA, with this subgroup reporting higher levels of posttraumatic stress symptoms and self-blame, and lower levels of forgiveness and self-compassion than those who had not also experienced physical abuse.

Implications from these results must at best be speculative, given the lack of power to detect significant results. Based upon the data available, it appears that in a larger sample several of the abuse characteristics may have significantly impacted upon the outcome measures. It is worth considering whether, in contrast to each variable offering a unique contribution to outcomes, there is an issue of singularity whereby a cumulative effect of abuse characteristics is found which increases both the objective and subjective severity of the abuse experienced. Considering

specific characteristics as contributors to the latent variable of ‘severity’ could offer an explanation for the findings of reviews which have recently reported inconsistent results with regard to the effects of abuse characteristics (including duration and frequency of abuse, violent abuse, relationship to the perpetrator, multiple perpetrators and the presence of other forms of abuse in childhood) (Hillberg, Hamilton-Giachristis & Dixon, 2011; Maniglio, 2009). It may be more meaningful for future researchers to consider each characteristic as a contributing factor in a larger overarching construct of severity, with the exact nature of the outcomes being dependent upon the nature and amount of the individual characteristics contributing to overall ‘severity’.

The fact that frequency and duration of abuse could not be included within the analysis due to issues with reporting of the information highlights one of the challenges associated with this type of research. Many participants struggled to quantify these variables beyond subjective terms such as “often” or “several years”. They also indicated difficulties associated with experiencing abuse by different perpetrators at different times, and how best to convey this. These challenges highlight some of the difficulties associated with trying to define and measure levels of severity of abuse. Similarly, although this was a clinical sample, there was wide variation with respect to the type and level of mental health services which had been or were being received, however it was beyond the scope of this study to determine what impact therapeutic interventions had on the variables assessed in this study.

The final post-hoc analyses to be conducted were two hierarchical regression analyses. Correlational analyses (presented in the journal article) only have the ability to describe a relationship between two variables, whereas regression allows more in-depth exploration of the inter-relations between a number of variables. In this instance hierarchical regression (where known predictors are entered first) was specifically selected for the reasons outlined earlier, and

is considered more appropriate when there is a theoretical rationale for testing a particular model (Field, 2009) . The data met all the assumptions required for multiple regression, however it is understood to be substantially underpowered for this type of analysis. For instance, Cohen (1992) suggests that to conduct multiple regression, with three independent variables, $\alpha = .05$ and to find moderate effect sizes a sample of 76 is required. Green (1991) suggests a sample size of around 74 for this type of analysis.

The first analysis entered forgiveness at step 2. Although overall the model predicted a significant amount of the variance in PTSD (56%), the study was underpowered to detect the significance of the unique contribution that forgiveness scores made to the total predictive value of the model, despite forgiveness contributing a further 10% to the predictive power of the total model. The second analysis entered self-compassion at step 2. Again the overall model predicted a significant amount of the variance of PTSD symptoms (46%), however contrary to the first model, self-compassion did not add further predictive value to the model over and above dissociation and self-blame. Within both models the analysis only had sufficient power to detect a significant contribution of dissociation to PTSD symptoms.

Regression analysis is considered to be most robust when each predictor is strongly correlated with the outcome variable but not with each other (Tabachnick & Fidell, 2001). When correlations between variables were explored (in the journal article, above) posttraumatic stress symptoms were found to moderately correlate with self-compassion, however there were also moderate correlations between self-compassion and dissociation and self-blame. The lack of contribution by self-compassion to the model could be indicative of multicollinearity between self-compassion and dissociation/self-blame. However inspection of the correlation coefficients suggests that this was not the case. It is also possible that the relationship between self-

compassion and PTSD in this sample, is fully mediated by dissociation and/or self-blame. Low power means that the conditions are not met in order to conduct mediational analysis (e.g. correlations are non-significant; Baron & Kenny, 1986).

In contrast, the correlation between forgiveness and posttraumatic stress was negligible, but a significant, moderate to large correlation was found with dissociation. Therefore, one might anticipate that forgiveness would not contribute to the model over and above the contribution made by dissociation. The fact that forgiveness contributes a further 10% of the variance beyond dissociation and self-blame is suggestive that forgiveness contributes to the overall model of PTSD by acting as a suppressor variable. This means that given the robust relationship between forgiveness and dissociation, forgiveness accounts for some of the irrelevant variance in the relationship between dissociation and PTSD, increasing the predictive power of dissociation. In both regression analyses around half the variance in posttraumatic stress was unaccounted for, and the literature to date remains inconsistent in respect of which other factors may best account for this. The task of future research, then, is to discover the most parsimonious model that identifies the fewest predictors necessary to account for the largest possible amount of variation in posttraumatic stress (as well as other outcomes) following CSA. A further task is to identify which factors may be most susceptible to change, and therefore offer the possibility of efficacious and effective interventions.

A final note: This study carried out a large number of planned and post-hoc analyses. There is a risk of multiple testing increasing the possibility of a Type 1 error (finding a statistically significant result by chance and thus rejecting the null hypothesis when it is correct). Although this issue can be addressed by applying Bonferroni corrections (a highly conservative method by which to reduce the level at which a result is accepted as being significant), this increases the

chances of encountering a Type 2 error particularly in a study already lacking in power (Field, 2009). Thus both Bonferroni corrections and the standard value ($p < .05$) are provided.

Challenges of Recruitment

In view of the original aims of the research, and proposed sample size, stated above, it should be apparent that this project experienced difficulties in recruitment of participants. It was beyond the scope of the research to include any direct collection of data as to why this might be the case however there are a number of possible factors.

Given the nature of the research and the fact that a clinical sample was being recruited, a large proportion of time was taken ensuring that the project met satisfactory ethical procedures and that the local area contacts were willing to support the research project in their area (including signing off on the cover letter). Once this was in place the researcher was reliant upon high numbers of other people to promote the project and disseminate information packs to appropriate individuals. The large geographical areas involved meant that it was not possible to meet with staff teams, which may have increased clinician responses.

When designing the study it was considered appropriate for the researcher to meet with participants, in order to answer questions and clarify instructions. It is not possible to know whether this significantly reduced the response rate, but it is feasible that people were more reluctant to come and meet with a stranger and answer questions about this type of experience. It was not possible to provide exact information with regard to the nature of the questionnaires being used, in order to avoid priming effects. For example, during administration the Enright Forgiveness Inventory is referred to as an 'Attitude Scale' and the Self-Compassion Scale is entitled 'How I typically act towards myself in difficult times'. This is to avoid issues relating to

how people understand the terms ‘forgiveness’ and ‘self-compassion’ but further information may have reduced both clinician and patient anxiety about the level of distress likely to be experienced.

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Thesis Appendices

Appendix I – Clinical Psychology Review: Author Guidelines

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For papers that exceed 35 pages, authors must justify the extended length in their cover letter (e.g., reporting of multiple studies), and in no case should the paper exceed 45 pages total. Papers that do not conform to these guidelines may be returned without review.

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This type of article should not exceed approximately one half the length of the original paper (note that 1 journal page equals approximately 3–3.5 manuscript pages). Unless permission from the editor is received, no Extended Comment should exceed 20 manuscript pages inclusive of all references, tables, and figures.

Similar to a Brief Comment, where and when appropriate, if such a paper is accepted, the author(s) of the original article(s) will be contacted to write a response, whereupon, if acceptable, both the Extended Comment and Response would be published together. This Invited Response should not exceed approximately one half the length of the Extended Comment.

The title of this type of article need not include a subtitle representing the original article(s). One important review criteria involves the timeliness of the topic and its potential contribution to the scientific literature base relevant to the scope of *JCCP* content.

Conceptual/Theoretical Papers

Whereas the majority of papers published in *JCCP* will involve descriptions of quantitatively-based investigations, this journal also considers conceptual articles on topics of broad theoretical, methodological, or practical interest that advance the field of clinical psychology. Examples might include describing a new methodological or statistical procedure, delineating methods of enhancing dissemination of research findings from the lab to real-world settings, or advocating the need to increase the profession's research efforts regarding a traditionally underserved population.

Similar formatting guidelines for submitting a full length research article would apply for these types of papers.

Title of Manuscript

The title of a manuscript should be accurate, fully explanatory, and preferably no longer than 12 words. The title should reflect the content and population studied (e.g., "treatment of generalized anxiety disorders in adults").

If the paper reports a randomized clinical trial (RCT), this should be indicated in the title. Note that JARS criteria must be used for reporting purposes.

Abstract and Keywords

Starting in 2010, all manuscripts published in the *Journal of Consulting and Clinical Psychology* will include a structured abstract of up to 250 words.

For studies that report randomized clinical trials or meta-analyses, the abstract also must be consistent with the guidelines set forth by JARS or MARS (Meta-Analysis Reporting Standards) guidelines, respectively. Thus, in preparing a manuscript, please ensure that it is consistent with the guidelines stated below.

Please include an Abstract of up to 250 words, presented in paragraph form. The Abstract should be typed on a separate page (page 2 of the manuscript), and must include each of the following sections:

- **Objective:** A brief statement of the purpose of the study
- **Method:** A detailed summary of the participants (*N*, age, gender, ethnicity) as well as descriptions of the study design, measures (including names of measures), and procedures
- **Results:** A detailed summary of the primary findings that clearly articulate comparison groups (if relevant), and that indicate significance or confidence intervals for the main findings
- **Conclusions:** A description of the research and clinical implications of the findings

After the abstract, please supply up to five keywords or short phrases.

Participants: Description and Informed Consent

The Method section of each empirical report must contain a detailed description of the study participants, including (but not limited to) the following: age, gender, ethnicity, SES, clinical diagnoses and comorbidities (as appropriate), and any other relevant demographics.

In the Discussion section of the manuscript, authors should discuss the diversity of their study samples and the generalizability of their findings.

The Method section also must include a statement describing how informed consent was obtained from the participants (or their parents/guardians) and indicate that the study was conducted in compliance with an appropriate Internal Review Board.

Measures

The Method section of empirical reports must contain a sufficiently detailed description of the measures used so that the reader understands the item content, scoring procedures, and total scores or subscales. Evidence of reliability and validity with similar populations should be provided.

Statistical Reporting of Clinical Significance

JCCP requires the statistical reporting of measures that convey clinical significance. Authors should report means and standard deviations for all continuous study variables and the effect sizes for the primary study findings. (If effect sizes are not available for a particular test, authors should convey this in their cover letter at the time of submission.)

JCCP also requires authors to report confidence intervals for any effect sizes involving principal outcomes (see Fidler et al., *Journal of Consulting and Clinical Psychology*, 2005, pp. 136–143 and Odgaard & Fowler, *Journal of Consulting and Clinical Psychology*, 2010, pp.287–297).

In addition, when reporting the results of interventions, authors should include indicators of clinically significant change. Authors may use one of several approaches that have been recommended for capturing clinical significance, including (but not limited to) the reliable change index (i.e., whether the amount of change displayed by a treated individual is large enough to be meaningful; see Jacobson et al., *Journal of Consulting and Clinical Psychology*, 1999), the extent to which dysfunctional individuals show movement into the functional distribution (see Jacobson & Truax, *Journal of Consulting and Clinical Psychology*, 1991), or other normative comparisons (see Kendall et al., *Journal of Consulting and Clinical Psychology*, 1999).

The special section of *JCCP* on "Clinical Significance" (*Journal of Consulting and Clinical Psychology*, 1999, pp. 283–339) contains detailed discussions of clinical significance and its measurement and should be a useful resource (see also Atkins et al., *Journal of Consulting and Clinical Psychology*, 2005, pp. 982–989).

Discussion of Clinical Implications

Articles must include a discussion of the clinical implications of the study findings or analytic review. The Discussion section should contain a clear statement of the extent of clinical application of the current assessment, prevention, or treatment methods. The extent of application to clinical practice may range from suggestions that the data are too preliminary to support widespread dissemination to descriptions of existing manuals available from the authors or archived materials that would allow full implementation at present.

Randomized Clinical Trials: Use of JARS Guidelines

JCCP requires the use of JARS guidelines for randomized clinical trials, consistent with the recommendations and policies established by the Publications and Communications Board of the American Psychological Association. JARS offers a standard way to improve the quality of such reports, and to ensure that readers have the information necessary to evaluate the quality of a clinical trial.

Manuscripts that report randomized clinical trials are required to include a flow diagram of the progress through the phases of the trial. When a study is not fully consistent with JARS guidelines, the limitations should be acknowledged and discussed in the text of the manuscript.

For follow-up studies of previously published clinical trials, authors should submit a flow diagram of the progress through the phases of the trial and follow-up. The above checklist information should be completed to the extent possible, especially for the Results and Discussion sections of the manuscript.

Authors of RCTs should also describe procedures to assess for treatment fidelity (also known as treatment integrity), including both therapist adherence and competence. Where possible, results should be reported regarding the relationship between fidelity and outcome found in the investigation.

- [View the JARS guidelines \(PDF, 98KB\)](#)

Meta-Analyses of Randomized Clinical Trials: Use of MARS Guidelines

JCCP requires the use of the APA MARS guidelines for meta-analyses of randomized clinical trials. MARS offers a standard way to improve the quality of such reports, and to ensure that readers have the information necessary to evaluate the quality of a meta-analysis.

Manuscripts that report meta-analyses of randomized clinical trials are required to include a flow diagram of the progress through the stages of the meta-analysis. When a study is not fully consistent with MARS, the limitations should be acknowledged and discussed in the text of the manuscript.

MARS guidelines are included in the [JARS guidelines \(PDF, 98KB\)](#)

Nonrandomized Trials

For nonrandomized designs that often are used in public health and mental-health interventions, *JCCP* requires compliance with JARS.

Failure to comply with JARS or MARS can result in the return of manuscripts without review.

Manuscript Preparation

Prepare manuscripts according to the *Publication Manual of the American Psychological Association* (6th edition). Manuscripts may be copyedited for bias-free language (see Chapter 3 of the *Publication Manual*).

Review APA's [Checklist for Manuscript Submission](#) before submitting your article.

Double-space all copy. Other formatting instructions, as well as instructions on preparing tables, figures, references, metrics, and abstracts, appear in the *Manual*.

Below are additional instructions regarding the preparation of display equations and tables.

Display Equations

We strongly encourage you to use MathType (third-party software) or Equation Editor 3.0 (built into pre-2007 versions of Word) to construct your equations, rather than the equation support that is built into Word 2007 and Word 2010. Equations composed with the built-in Word 2007/Word 2010 equation support are converted to low-resolution graphics when they enter the production process and must be rekeyed by the typesetter, which may introduce errors.

To construct your equations with MathType or Equation Editor 3.0:

- Go to the Text section of the Insert tab and select Object.
- Select MathType or Equation Editor 3.0 in the drop-down menu.

If you have an equation that has already been produced using Microsoft Word 2007 or 2010 and you have access to the full version of MathType 6.5 or later, you can convert this equation to MathType by clicking on MathType Insert Equation. Copy the equation from Microsoft Word and paste it into the MathType box. Verify that your equation is correct, click File, and then click Update. Your equation has now been inserted into your Word file as a MathType Equation.

Use Equation Editor 3.0 or MathType only for equations or for formulas that cannot be produced as Word text using the Times or Symbol font.

Tables

Use Word's Insert Table function when you create tables. Using spaces or tabs in your table will create problems when the table is typeset and may result in errors.

Submitting Supplemental Materials

APA can now place supplementary materials online, available via the published article in the PsycARTICLES® database. Please see [Supplementing Your Article With Online Material](#) for more details.

References

List references in alphabetical order. Each listed reference should be cited in text, and each text citation should be listed in the References section.

Examples of basic reference formats:

- **Journal Article:**
Hughes, G., Desantis, A., & Waszak, F. (2013). Mechanisms of intentional binding and sensory attenuation: The role of temporal prediction, temporal control, identity prediction, and motor prediction. *Psychological Bulletin*, 139, 133–151. <http://dx.doi.org/10.1037/a0028566>
- **Authored Book:**
Rogers, T. T., & McClelland, J. L. (2004). *Semantic cognition: A parallel distributed processing approach*. Cambridge, MA: MIT Press.
- **Chapter in an Edited Book:**
Gill, M. J., & Sypher, B. D. (2009). Workplace incivility and organizational trust. In P. Lutgen-Sandvik & B. D. Sypher (Eds.), *Destructive organizational communication: Processes, consequences, and constructive ways of organizing* (pp. 53–73). New York, NY: Taylor & Francis.

Figures

Graphics files are welcome if supplied as Tiff, EPS, or PowerPoint files. Multipanel figures (i.e., figures with parts labeled a, b, c, d, etc.) should be assembled into one file.

The minimum line weight for line art is 0.5 point for optimal printing.

For more information about acceptable resolutions, fonts, sizing, and other figure issues, [please see the general guidelines](#).

When possible, please place symbol legends below the figure instead of to the side.

Original color figures can be printed in color at the editor's and publisher's discretion provided the author agrees to pay

- \$255 for one figure
- \$425 for two figures
- \$575 for three figures
- \$675 for four figures
- \$55 for each additional figure

Permissions

Authors of accepted papers must obtain and provide to the editor on final acceptance all necessary permissions to reproduce in print and electronic form any copyrighted work, including, for example, test materials (or portions thereof) and photographs of people.

- [Download Permissions Alert Form \(PDF, 47KB\)](#)

Publication Policies

APA policy prohibits an author from submitting the same manuscript for concurrent consideration by two or more publications.

See also [APA Journals® Internet Posting Guidelines](#).

APA requires authors to reveal any possible conflict of interest in the conduct and reporting of research (e.g., financial interests in a test or procedure, funding by pharmaceutical companies for drug research).

- [Download Disclosure of Interests Form \(PDF, 38KB\)](#)

Authors of accepted manuscripts are required to transfer the copyright to APA.

- For manuscripts **not** funded by the Wellcome Trust or the Research Councils UK
[Publication Rights \(Copyright Transfer\) Form \(PDF, 83KB\)](#)
- For manuscripts funded by the Wellcome Trust or the Research Councils UK
[Wellcome Trust or Research Councils UK Publication Rights Form \(PDF, 34KB\)](#)

Ethical Principles

It is a violation of APA Ethical Principles to publish "as original data, data that have been previously published" (Standard 8.13).

In addition, APA Ethical Principles specify that "after research results are published, psychologists do not withhold the data on which their conclusions are based from other competent professionals who seek to verify the substantive claims through reanalysis and who intend to use such data only for that purpose, provided that the confidentiality of

the participants can be protected and unless legal rights concerning proprietary data preclude their release" (Standard 8.14).

APA expects authors to adhere to these standards. Specifically, APA expects authors to have their data available throughout the editorial review process and for at least 5 years after the date of publication.

Authors are required to state in writing that they have complied with APA ethical standards in the treatment of their sample, human or animal, or to describe the details of treatment.

- [Download Certification of Compliance With APA Ethical Principles Form \(PDF, 26KB\)](#)

The APA Ethics Office provides the full [Ethical Principles of Psychologists and Code of Conduct](#) electronically on its website in HTML, PDF, and Word format. You may also request a copy by [emailing](#) or calling the APA Ethics Office (202-336-5930). You may also read "Ethical Principles," December 1992, *American Psychologist*, Vol. 47, pp. 1597–1611.

Other Information

- [Appeals Process for Manuscript Submissions](#)
- [Preparing Auxiliary Files for Production](#)
- [Document Deposit Procedures for APA Journals](#)

Appendix III



Department of Psychological Services

New Craigs
6-16 Leachkin Road
Inverness IV3 8NP

Tel: 01463 253690

Fax: 01463 704686

E-mail: fiona.turnbull1@nhs.net

Clinician's Summary of Research Project

Project Title: "Factors Influencing Coping and Well-being Following Childhood Sexual Abuse"

Dear Colleagues,

The above study is being carried out as part of my doctoral thesis research project (through the University of Edinburgh and in conjunction with NHS Highland, NHS Grampian, NHS Tayside, NHS Forth Valley and NHS Lothian). Response rates have been much lower than expected and I would be extremely grateful if you would take the time to consider whether you have any patients on your caseload who may fit the inclusion/exclusion criteria, and whom you would be willing to forward an information pack to.

The study is a cross-sectional, questionnaire design. I will meet with participants for a one-off session to complete the questionnaires. It is anticipated that this will take about 1 hour. The questionnaires ask briefly about the nature of the abuse experienced and the impact of this, and also look at cognitive styles, experiential avoidance and participant's current attitudes towards themselves and the perpetrator(s).

As you may be aware, there is a large body of literature speaking to the range of difficulties experienced by adult survivors of CSA, but much less of an evidence base for effective interventions. It is hoped that this project will provide a meaningful contribution to the further development of therapeutic interventions for this population. The study aims to do this by investigating the mediating effects of certain coping strategies on outcomes which are usually associated with increased well-being.

Inclusion Criteria

- An experience of sexual abuse in childhood (any form of unwanted sexual contact before the age of 16 years).
- English as a first language
- Aged between 18-65 years
- Ability to provide informed consent

Exclusion Criteria

The presence of:

- A learning disability
- A neuro-degenerative condition
- Traumatic brain injury
- Current acute psychotic symptoms
- Attendance under the influence of drugs/alcohol

A number of packs will be sent to the adult dept c/o Linda Graham. If you have any potential participants on your caseload, please pass on a pack as soon as possible. Due to administrative delays I am now very short of time to carry out recruitment in Tayside. **I will be recruiting until the end of November only.** I would be grateful if you could emphasise this to anyone you pass an info pack to.

Please do not hesitate to contact me if you have any questions or require further information regarding the project. Thank you for taking the time to read this information sheet.

Yours sincerely,

Fiona Turnbull
Chief Investigator and Trainee Clinical Psychologist

fiona.turnbull1@nhs.net

Appendix IV - Participant Cover Letter

Department of Psychological Services

New Craigs Hospital

Leachkin Road

Inverness IV3 8NP

Tel: 01463 253690

Fax: 01463 704686

Dear Sir/Madam,

This letter is an invitation to take part in a research project that is being carried out in NHS Highland (in conjunction with NHS Grampian and NHS Lothian) which aims to develop a greater understanding of the different factors which affect coping, recovery and well-being following an experience of sexual abuse in childhood.

We know that this type of experience can have a significant, long lasting impact on those who have been affected. This can include a wide-range of mental health difficulties, as well as difficulties with social situations and relationships with others. It is important for us to understand as much as we can about the effects of sexual abuse, and what helps people cope with these effects, in order to ensure that health services can provide the best possible care and support for those who need it.

If you have not had an experience of sexual abuse in childhood, or you have but do not wish to take part in this study, then you do not need to do anything in response to this letter. The services you receive will be in no way affected by your decision.

If you think you may have had an experience during childhood which would be considered as sexual abuse, and you would consider participating in this type of study, please read the enclosed information sheet carefully before making your decision.

If you have any questions or concerns please see the information sheet for details of who to contact with regard to this research project. Thank you for taking the time to read this letter.

Yours sincerely



Participant Information Sheet

**The following information relates to the research project:
“Factors Influencing Coping and Well-Being Following Childhood Sexual Abuse”**

What is this study about?

The aim of this research project is to investigate some of the effects that an experience of sexual abuse can have on those who have been affected, and to find out if there are things that reduce the negative impact of such an experience.

It is hoped that the information generated by the study will help to aid understanding of the effects of sexual abuse, as well as contributing to professionals knowledge of the best ways of helping and supporting those affected.

Why have I been asked to take part?

You should have been given this information by a professional working in mental health services. They have been asked to pass on this information pack to anyone whom they think may be eligible to take part in the study.

Who is carrying out this research project?

This research is being undertaken as part of a Clinical Psychology Doctorate thesis through the University of Edinburgh. The Principal Researcher (Fiona Turnbull) is employed within NHS Highland as a trainee clinical psychologist.

The study has been reviewed by academic staff at the University of Edinburgh, approved by NHS Highland R&D Management and has been subject to ethical review by The North of Scotland Research Ethics Committee. The study is being supervised by Dr. Doug Hutchison (Clinical Psychologist, NHS Highland) and Prof. Mick Power (Academic Supervisor, University of Edinburgh). Contact details can be found below.

Is there any reason I would not be allowed/should not take part?

It is your decision whether or not to participate in this research. Given the sensitive nature of the study it is important for you to consider the emotional impact that taking part might have on you.

The main criteria for being included in the study are that you are an adult (between the ages of 18-65 years) and that you had an unwanted sexual experience before the age of 16 years old. An experience that would fit within this definition would usually be understood as being one of childhood sexual abuse.

You would **NOT** be eligible for the study if you have: a diagnosis of a learning disability; a traumatic brain injury; a neuro-degenerative condition (such as dementia); you are experiencing acute psychotic symptoms, or you are under the influence of drugs/alcohol, when attending the appointment.

Due to the fact that participation will involve completing a number of questionnaires you must be fluent in speaking and reading English.

If you are unsure about any of the above criteria, and whether or not you are eligible to take part, you can contact the principal researcher to discuss this further. Your decision to take part in this study will in no way affect the services you receive.

What will I have to do?

Once you have registered your interest in taking part the researcher will contact you to arrange a convenient time and place to meet. This will be a one-off meeting and should last no longer than 1 hour.

When you meet with the researcher you will have the opportunity to discuss the research in more depth, and ask any further questions you may have. If you still wish to participate at this stage the researcher will ask you to sign a consent form to indicate that you have agreed to take part. You will then be given some questionnaires to complete. These questionnaires will ask about a range of different things including: basic information about you (such as gender and age); some information about the type of abuse you experienced; the impact this experience has had and other questions about how you think, feel and behave in your daily life.

The researcher will be in room while you are completing the questionnaires and will explain what is being asked. If you have any questions at any time throughout the process you can ask the researcher.

Once you have finished completing the questionnaires you will have the opportunity to discuss any issues that have arisen from them with the researcher.

What will happen if I become upset/distressed whilst participating in the study?

It is understandable that you may become upset or distressed by thinking about your experiences. The researcher will be with you at all times and is trained to support people in distress. You will have the opportunity to discuss anything of particular concern and the researcher may advise you to contact your GP, or other services for further support if necessary.

Depending on how distressed you are the researcher may seek your permission to contact your GP or other professionals on your behalf.

If I agree to take part, can I change my mind?

Absolutely. You can change your mind about participating in this research project at any time. You do not have to give a reason for choosing to withdraw from the study, and this will in no way affect any of the services you receive.

What will happen to the information I provide?

If you decide to participate you will be asked to sign a consent form. This is the only document that will have your name on it. Only the researcher will have access to this and it will be retained in a locked cabinet on NHS property.

The rest of the information you provide on the questionnaires will be anonymous. All the data provided will be stored electronically and analysed by the researcher. The data collected will form part of a Doctoral thesis, and may be published in academic journals or presented at conferences.

If you wish to receive information about the outcomes of the study you can provide contact details and the researcher will send you information relating to the key findings once the project has finished.

CONFIDENTIALITY – All the information you provide for the research project will be confidential and kept anonymous. If, however, during the course of your participation you disclose something to the researcher that indicates there is current risk of harm either to yourself or to someone else, then she has a duty to pass this information to other relevant professionals (such as social work or the police). If this was to happen it would be discussed with you prior to any action being taken.

How do I register my interest in taking part?

There are several ways you can register an interest in taking part in this study. Registering your interest does not mean that you are agreeing to take part, it means you are agreeing to being contacted by the researcher. As stated above, you can withdraw from the study at any time.

Register your interest by:

- **Telephone.** You can call the principal researcher on **01463 253 690**. This number will put you through to the psychology department, and you should then ask to speak to Fiona Turnbull. If Fiona is not available you can leave a message or call back another time.
- **Email.** You can register your interest by emailing Fiona Turnbull at fiona.turnbull1@nhs.net. Please provide a telephone number and indicate when it would be convenient to call you.
- **Post.** You can complete and return the 'Expression of Interest' form in the stamped addressed envelope provided.

Contact Details

Please contact those involved for further information relating to this project.

Fiona Turnbull (Principal Researcher): Psychology Department, New Craigs Hospital, Leachkin Road, Inverness, IV3 8NP. Telephone: 01463 253690. Email: fiona.turnbull1@nhs.net

Dr Doug Hutchison (Supervisor, Clinical Psychologist): Psychology Department, New Craigs Hospital, Leachkin Road, Inverness, IV3 8NP. Telephone: 01463 253690. Email: doug.hutchinson@nhs.net

Prof Mick Power (Academic Supervisor): School for Health and Social Sciences, Old Medical School, Teviot Place, University of Edinburgh, Edinburgh, EH8 9AG. Telephone: 0131 651 3972. Email: mjpower@staffmail.ed.ac.uk

If you wish to speak to someone independent, who can talk to you about taking part in psychological research in general (but not specifically about this project), please contact:

Dr Jim Law (Consultant Clinical Psychologist): Drumossie Unit, New Craigs Hospital, Leachkin Road, Inverness, IV3 8NP. Telephone: 01463 253 697. Email: jim.law@nhs.net

By completing and returning this form in the stamped addressed envelope provided you are acknowledging consent to be contacted by the principal researcher with regard to participation in the research project "Factors Influencing Coping and Well-Being Following Childhood Sexual Abuse".

Please enter your name and a contact telephone number in the space below, and sign at the bottom of the page. If there are times you do NOT wish to be contacted, please indicate these.

Name.....

Area (please circle): Highland Tayside Forth Valley Lothian

Home No.....

Mobile No.....

Are there any times when you do NOT wish to be contacted? Yes No

If yes, please give details:

Is it okay for the researcher contacting you to leave a message?

- On an answering service: Yes No
- With another person who may answer the phone: Yes No

Signature:.....

Date:.....

Gender (circle as appropriate): MALE FEMALE

Age:.....

Occupation.....

Ethnicity:.....

Nationality:.....

Marital Status:.....

Please state which mental health service(s) you currently have involvement with? (for example, Community Mental Health Team/Community Psychiatric Nurse/Psychiatry/Psychology/ Occupational Therapy/voluntary organisation)

.....

Have you received any other mental health services in the past (circle as appropriate)?

YES

NO

If yes, please state which services you have had previously:

.....

If known, please state the reason for your referral to mental health services:

.....

Experience of Abuse

As you know, this study is interested in the views of people who have had an experience of sexual abuse in childhood. The following questions ask you to provide some information about the nature of the abuse which took place.

Sometimes when people have experienced one type of abuse in childhood, they may also have experienced other types of abuse as well. When we are carrying out research it can be helpful to know about other abuse which may have gone on. This is why there are additional questions which do not relate to sexual abuse.

Childhood Sexual Abuse

Please state your relationship to the person(s) who committed the sexual abuse

.....

Approximately how often did the abuse take place?.....

Please indicate how old you were at the time of the abuse.....

Was the abuse ever painful/violent? Yes No

Did the abuse involve:

- Physical contact with another person(s) (e.g. touching, kissing, intercourse): Yes No
- Witnessing sexual acts: Yes No
- Other:.....

Other Abusive Experiences in Childhood

Were you ever physically assaulted? Yes No

If yes, by whom and at what age.....

Were you ever in a situation where you regularly did not have enough food/clothes/
shelter/warmth/water? Yes No

Was there anyone who regularly shouted at/threatened/criticised you? Yes No

If yes, whom and at what age.....



Participant Consent Form

Title of Project: "Factors Influencing Coping and Well-Being Following Childhood Sexual Abuse".

Name of Researcher: Fiona Turnbull

Please Initial Box:

1. I confirm that I have read and understood the information sheet dated 01/11/12 (version 2) for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily. ☐
2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reason, without my medical care or legal rights being affected. ☐
3. The information I provide will contribute towards a research project and the results of this project may be disseminated and available publicly. ☐
4. Should I disclose any information that indicates a current risk of harm to myself or another person the researcher has a duty to pass this on to other professionals. ☐
5. I agree to take part in the above study. ☐

.....
Name of Patient	Date	Signature

.....
Name of Researcher	Date	Signature

If you wish to receive information relating to the outcome of the study please provide details of your address in the space below. If you do not wish to receive this information then leave this space blank.

Appendix X - Ethics Confirmation letter

NRES Committees - North of Scotland

Summerfield House
2 Eday Road
Aberdeen
AB15 6RE

Telephone: 01224 558458
Facsimile: 01224 558609
Email: nosres@nhs.net



16 January 2013

Ms Fiona Turnbull
Psychology Department
New Craigs Hospital
Leachkin Road
INVERNESS
IV3 8NP

Dear Ms Turnbull

Study title: Factors Influencing Coping and Well-Being Following Childhood Sexual Abuse.
REC reference: 12/NS/0117
IRAS project ID: 119117

Thank you for your letter of 27 December 2012, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information was considered by the Chair.

We plan to publish your research summary wording for the above study on the NRES website, together with your contact details, unless you expressly withhold permission to do so. Publication will be no earlier than three months from the date of this favourable opinion letter. Should you wish to provide a substitute contact point, require further information, or wish to withhold permission to publish, please contact the Co-ordinator Mrs Carol Irvine, carolirvine@nhs.net.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, protocol and supporting documentation as revised, subject to the conditions specified below.

Ethical review of research sites

NHS sites

The favourable opinion applies to all NHS sites taking part in the study, subject to management permission being obtained from the NHS/HSC R&D office prior to the start of the study (see "Conditions of the favourable opinion" below).

Non-NHS sites

Conditions of the favourable opinion

The favourable opinion is subject to the following conditions being met prior to the start of the study.

Management permission or approval must be obtained from each host organisation prior to the start of the study at the site concerned.

Management permission ("R&D approval") should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements.

Guidance on applying for NHS permission for research is available in the Integrated Research Application System or at <http://www.rdforum.nhs.uk>.

It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

<i>Document</i>	<i>Version</i>	<i>Date</i>
Covering Letter		19 November 2012
Covering Letter		27 December 2012
Investigator CV		17 August 2012
Letter of invitation to participant: NHS Grampian	3	27 December 2012
CV - Michael Power		23 August 2012
Participant Consent to Contact Services Form	2	1 November 2012
Expression of Interest Form	2	1 November 2012
Confirmation of Supervision - Dr D Hutchison		10 October 2012
Confirmation of Supervision - Professor Power		14 November 2012
Confirmation of Supervision - Dr J Law		2 November 2012
Letter of Invitation - NHS Lothian	3	27 December 2012
Letter of Invitation - NHS Highland	3	27 December 2012
Sample Size Calculation		11 January 2013
Participant Consent Form	3	27 December 2012
Participant Information Sheet	2	1 November 2012
Protocol	2	31 October 2012
Questionnaire: Participant Demographic	2	1 November 2012
Questionnaire: Experience of Abuse	1	1 November 2012
Questionnaire: Impact of Event Scale - Revised		1 November 2012
Questionnaire: DES		1 November 2012
Questionnaire: CDS Test Booklet		1 November 2012
Questionnaire: How I typically act towards myself in difficult times		1 November 2012

Document	Version	Date
Questionnaire: The Enright Forgiveness Inventory		16 August 2012
REC application		18 November 2012
Referees or other scientific critique report		31 July 2012
Response to Request for Further Information		27 December 2012

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

After ethical review

Reporting requirements

The attached document "*After ethical review – guidance for researchers*" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

- Notifying substantial amendments
- Adding new sites and investigators
- Notification of serious breaches of the protocol
- Progress and safety reports
- Notifying the end of the study

The NRES website also provides guidance on these topics, which is updated in the light of changes in reporting requirements or procedures.

Feedback

You are invited to give your view of the service that you have received from the National Research Ethics Service and the application procedure. If you wish to make your views known please use the feedback form available on the website.

Further information is available at National Research Ethics Service website > After Review.

12/NS/0117	Please quote this number on all correspondence
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We are pleased to welcome researchers and R & D staff at our NRES committee members' training days – see details at <http://www.hra.nhs.uk/hra-training/>

With the Committee's best wishes for the success of this project.

Yours sincerely

Dr Alex Johnstone

PP Dr Alex Johnstone
Chair

Enclosures: After ethical review – guidance for researchers SL-AR2

Copy to: Ms Frances Hines, NHS Highland

Appendix XI - Ethics confirmation of amendment

NRES Committees - North of Scotland

Summerfield House
2 Eday Road
Aberdeen
AB15 6RE

Telephone: 01224 558458
Facsimile: 01224 558609
Email: nosres@nhs.net



19 July 2013

Ms Fiona Turnbull
Psychology Department
New Craigs Hospital
Leachkin Road
INVERNESS
IV3 8NP

Dear Ms Turnbull

Study title:	Factors Influencing Coping and Well-Being Following Childhood Sexual Abuse.
REC reference:	12/NS/0117
Amendment number:	AM01
Amendment date:	17 July 2013
IRAS project ID:	119117

Thank you for your letter of 17 July 2013, notifying the Committee of the above amendment.

The amendment has been considered by the Ethics Co-ordinator.

- An extension to the study has been granted to 27 November 2013.

The Committee does not consider this to be a "substantial amendment" as defined in the Standard Operating Procedures for Research Ethics Committees. The amendment does not therefore require an ethical opinion from the Committee and may be implemented immediately, provided that it does not affect the approval for the research given by the R&D office for the relevant NHS care organisation.

Documents received

The documents received were as follows:

Document	Version	Date
Notification of a Minor Amendment – Covering Letter	AM01	17 July 2013
Covering Letter		17 July 2013

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

12/NS/0117:	Please quote this number on all correspondence
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Yours sincerely

Carol Irvine

Mrs Carol Irvine
Ethics Co-ordinator

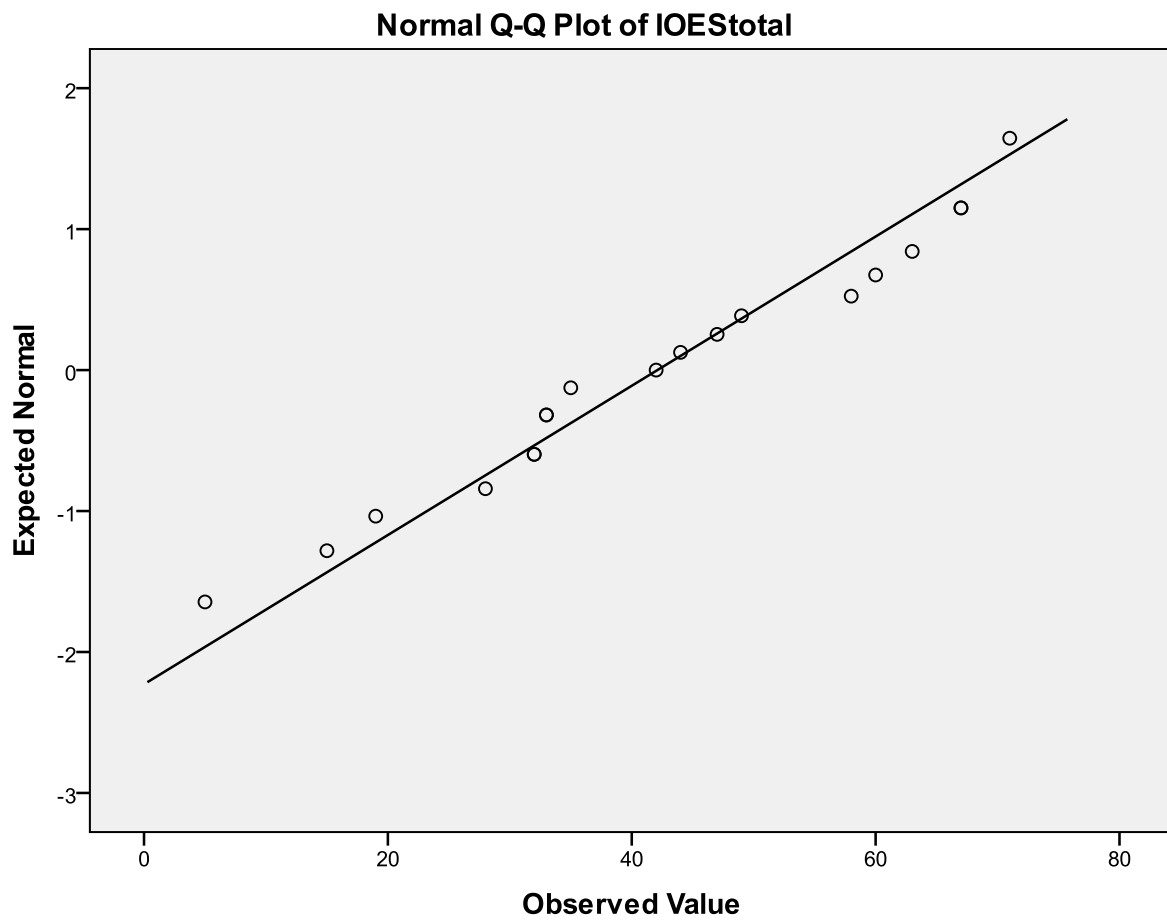
Copy to: Ms Frances Hines, NHS Highland

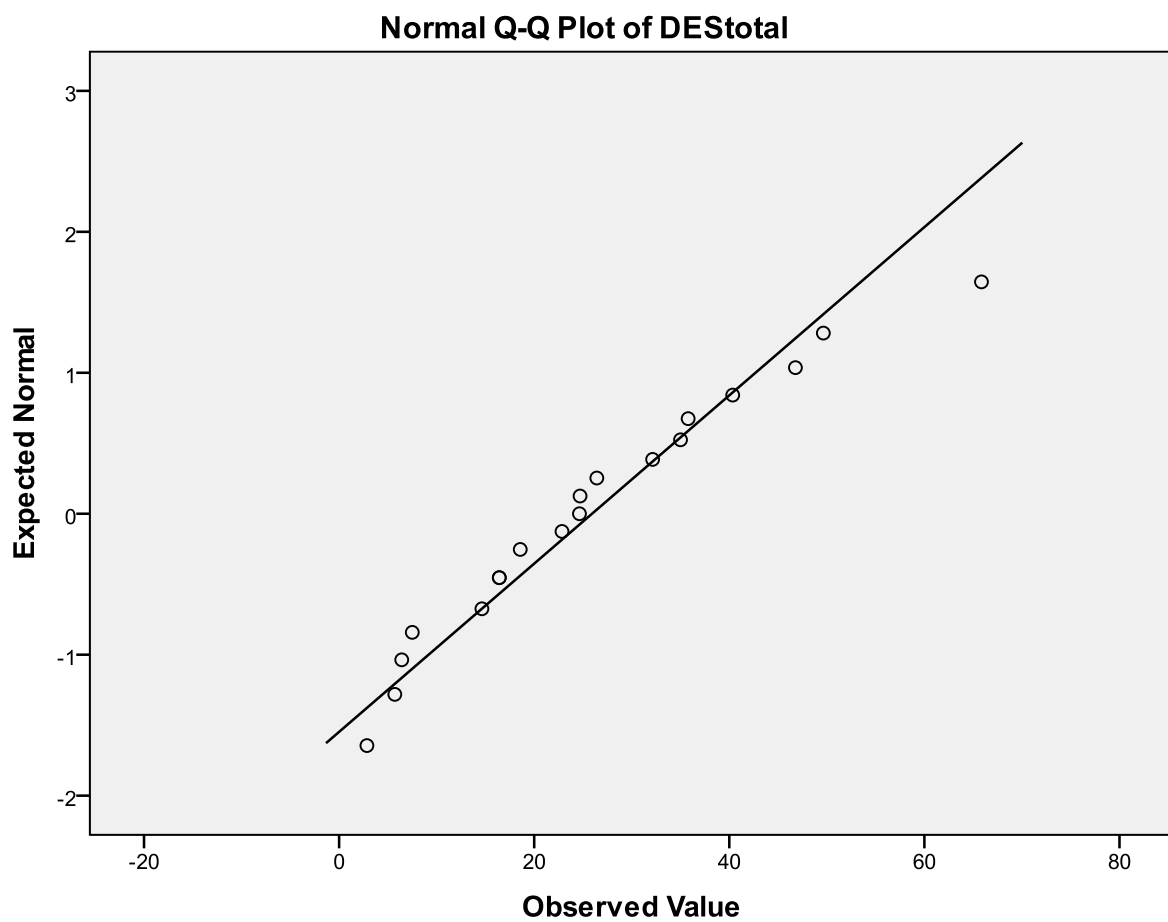
Appendix XII – Experience of Abuse Characteristics

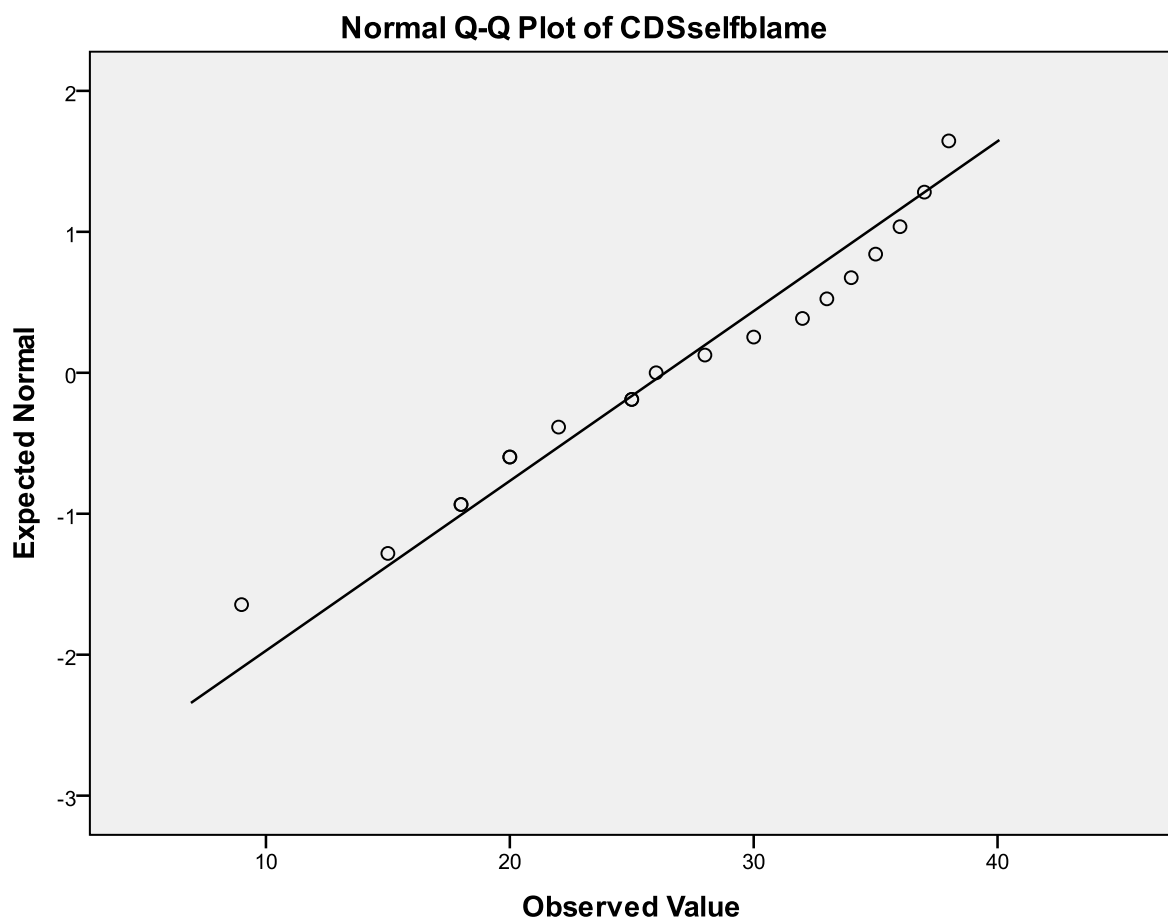
<u>Characteristic</u>	<u>N (Total = 19)</u>	<u>Range, Mean (SD)</u>	<u>%</u>
<u>Perpetrator:</u>			
Parent	4	-	21.1
Grandparent	1	-	5.3
Sibling	1	-	5.3
Other family/friend	7	-	36.8
Stranger	1	-	5.3
Multiple	5	-	26.3
<u>Age Abuse Began</u>	19	2-13 years, 6.58 (3.746)	-
<u>Duration:</u>			
Once	1	-	5.3
<1 year	1	-	5.3
1-5 years	7	-	36.8
5-10 years	6	-	31.6
>10 years	4	-	21.1
<u>Frequency:</u>			
Once	1	-	5.3
Several (2-10)	3	-	15.8
Many (>10)	12	-	63.2
Don't Know	2	-	10.5
Missing	1	-	5.3
<u>Painful:</u>			
Yes	11	-	57.9
No	7	-	36.8
Don't Know	1	-	5.3
<u>Physical Contact:</u>			
Yes	19	-	100
No	0	-	0
<u>Witnessing:</u>			
Yes	8	-	42.1
No	9	-	47.4
Missing	2	-	10.5
<u>Other:</u>			
Yes	2	-	10.5
No	17	-	89.5
<u>Physical Abuse:</u>			
Yes	9	-	47.4
No	10	-	52.6
<u>PA Perpetrator:</u>			
Parent	4	-	21.1
Sibling	1	-	5.3
Multiple	4	-	21.1
N/A	10	-	52.6
<u>PA Age</u>	9	1-11 years, 3 (3.317)	-

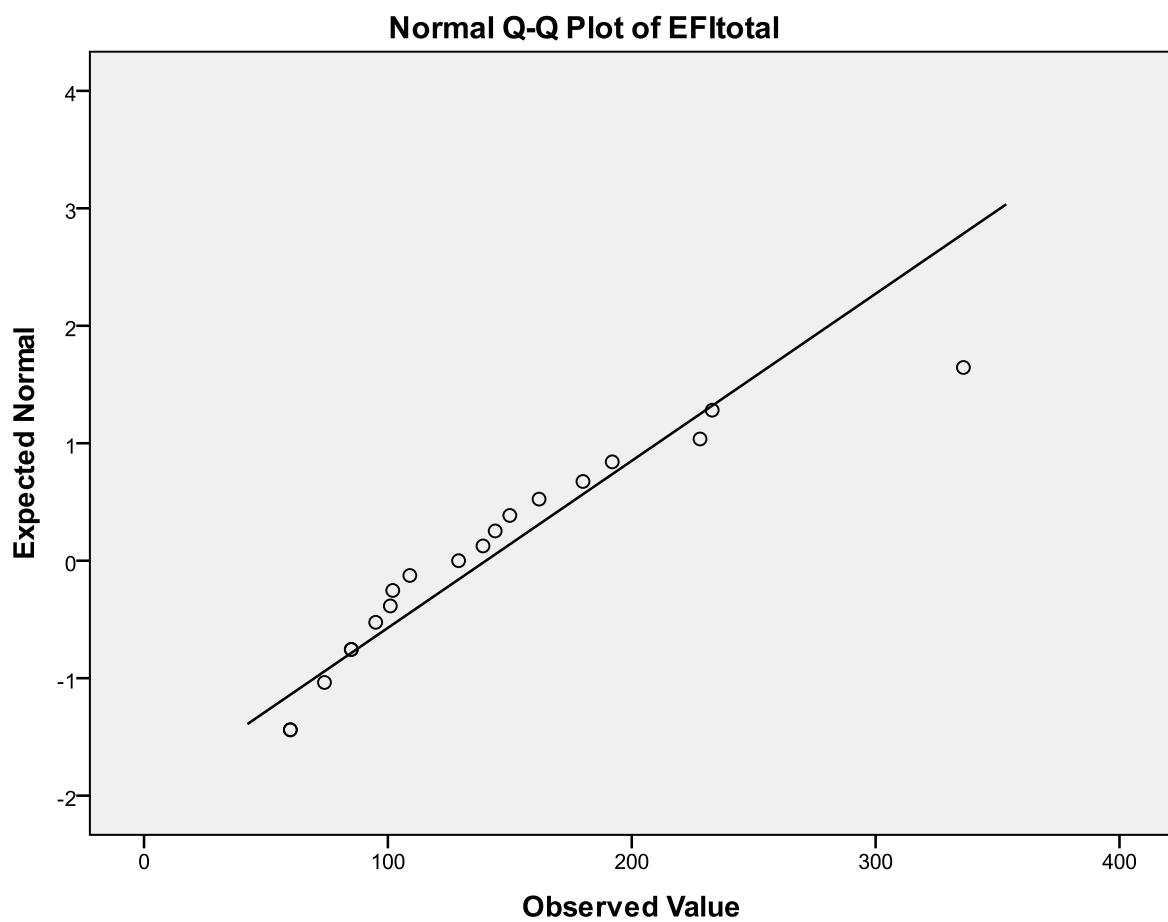
<u>PA Duration:</u>			
1-5 years	1	-	5.3
>10 years	5	-	26.3
Missing	3	-	15.8
N/A	10	-	52.6
<u>Emotional Abuse:</u>			
Yes	14	-	73.7
No	5	-	26.3
<u>EA Perpetrator:</u>			
Parent	5	-	26.3
Grandparent	1	-	5.3
Sibling	1	-	5.3
Multiple	7	-	36.8
N/A	5	-	26.3
<u>EA Age</u>	14	1-11 years, 2.29 (2.785)	-
<u>EA Duration:</u>			
5-10 years	1	-	5.3
>10 years	11	-	57.9
N/A	5	-	26.3
Missing	2	-	10.5
<u>Neglect:</u>			
Yes	6	-	31.6
No	13	-	68.4

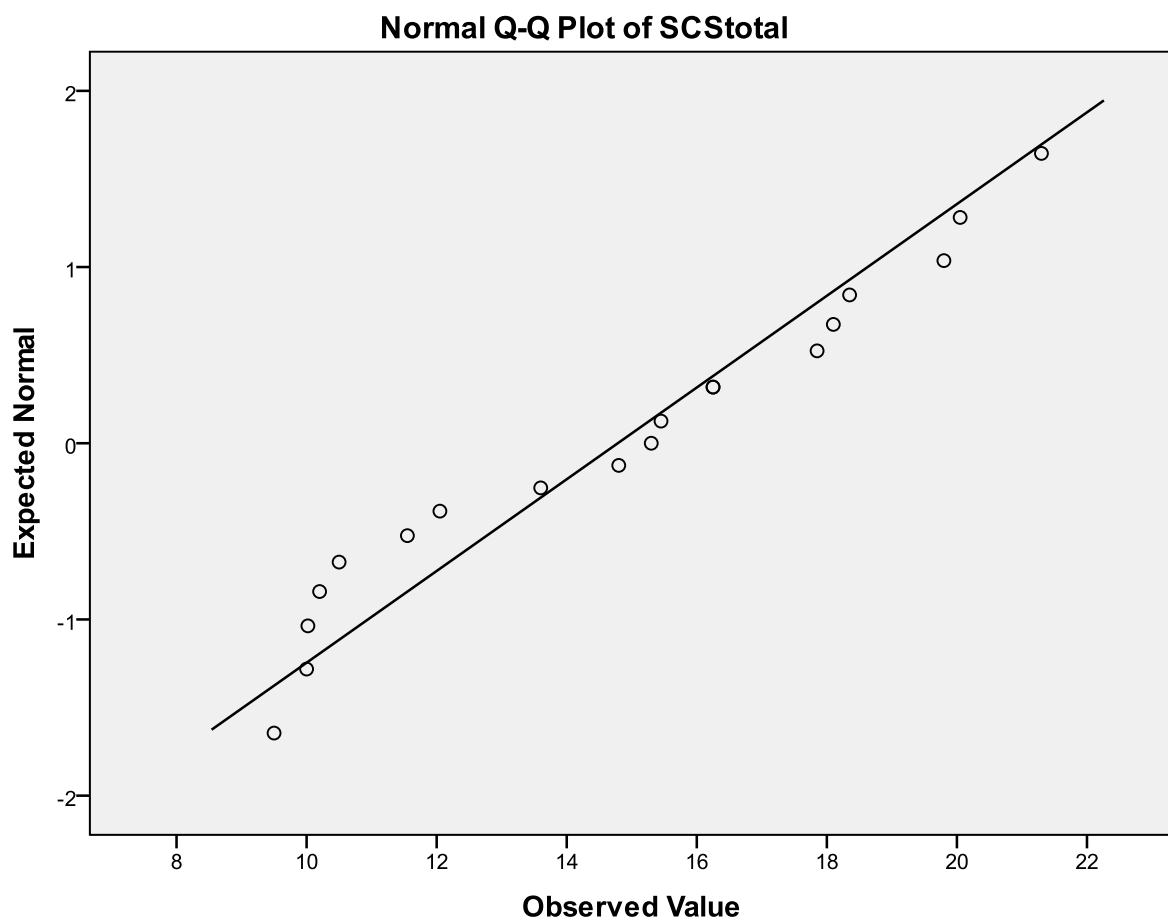
Appendix XII – Normal Q-Q Plots



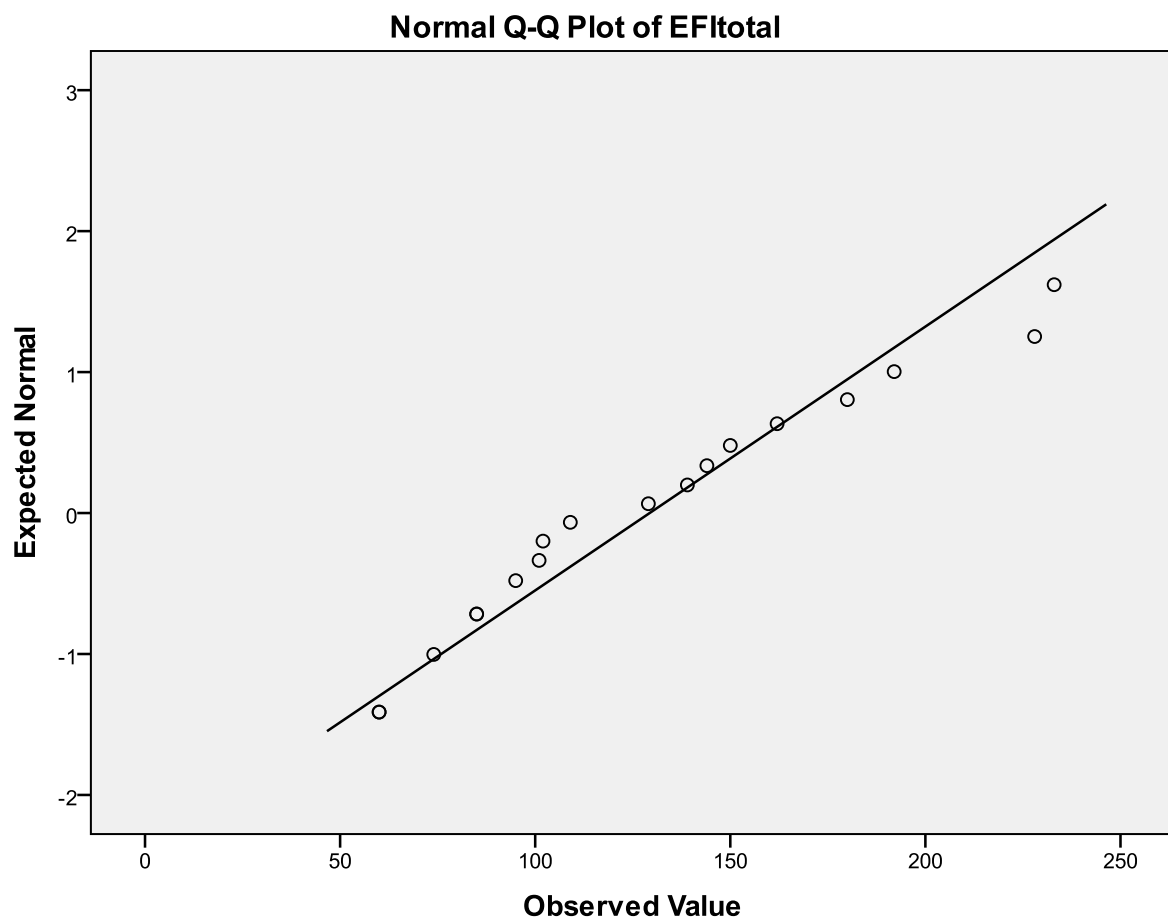








Amended EFI Total Score Q-Q plot



Appendix – XIV

Kolmogorov-Smirnoff scores for Total Scores

<u>Measure</u>	IES-R	DES-II	CDS	EFI	SCS
K-S Score	.200*	.200*	.200*	.200*	.200*

*. This is a lower bound of the true significance.